Parcel B - Phase II Soil Characterization Boeing Realty Company C-6 Facility Los Angeles, California

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> January 1998 K/J 974002.00

PARCEL B - PHASE II SOIL CHARACTERIZATION BOEING REALTY CORPORATION C-6 FACILITY LOS ANGELES, CALIFORNIA

EXECUTIVE SUMMARY

This report discusses the Phase II Soil Characterization for Parcel B of the Boeing Realty Corporation (BRC) C-6 Facility (Facility) located at 19503 South Normandie Avenue, Los Angeles, California. The characterization was completed under the oversight of the Los Angeles Region of the Regional Water Quality Control Board (RWQCB) as the lead agency, with input from the Department of Toxic Substance Control (DTSC). The Parcel B Report is the second of three reports that cover most of the Facility. The report sections include:

1.0 Introduction

Section 1.0 describes Parcel B and discusses the purpose of the investigation.

2.0 Parcel B Description

Section 2.0 provides a brief history of the Facility, with particular emphasis on Parcel B, which encompasses Areas 2 and 6. Hydrogeologic setting is summarized, based on published reports and previous work, and geologic units identified from the Phase II Soil Characterization are described.

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3.0 Program Design

Section 3.0 presents a detailed description of the Facility-wide soil characterization program. It discusses the historical use of each potential area of concern in Parcel B and explains the rationale used in determining the analytical program.

4.0 Soil Sampling and Analytical Methods

Section 4.0 describes the soil sampling program, including drilling, sampling and analytical methodology, chain of custody, and QA/QC program.

5.0 Investigation Results

Section 5.0 discusses the results from each area and presents findings in tables and figures. The complete laboratory reports are provided in appendices to the report.

6.0 Conclusions

Section 6.0 summarizes the conclusions resulting from the investigation.

7.0 References Cited

Section 7.0 presents a list of references cited throughout the report.

PURPOSE

The purpose of the Phase II Soil Characterization was to characterize the nature of the soils and to identify areas of concern in Parcel B. These data will provide support to develop a risk assessment, to plan future groundwater investigations, and for future feasibility studies and soil remediation, if required. The soil characterization included the

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physical properties of the soils, the subsurface distribution of the soil types, the identification of areas of potential concern, and the nature and extent of any chemicals of potential concern (COPCs) within the soils.

LOCATION AND DESCRIPTION OF AREAS 2 AND 6

The Facility is located at 19503 South Normandie Avenue in Los Angeles, California (Figure 1). The Facility is bordered on the north by West 190th Street, on the east by railroad tracks and South Normandie Avenue, on the south by Montrose Chemical and residential properties, and on the west by Western Avenue, Capitol Metals, and International Light Metals (ILM).

Areas 2 and 6 occupy approximately 52 acres in the southwestern portion of the Facility. Area 2, comprising approximately 33 acres, is bordered on the north by Capitol Metals and Area 6, on the east by a Los Angeles Department of Water and Power (LADWP) electrical substation, former Montrose Chemicals, and Jones Chemicals, on the south by residential properties, and on the west by Western Avenue. Area 6, comprising approximately 19 acres, is bordered on the north by portions of the Facility including buildings 4, 11, 13, 14 and 15, on the east by portions of the Facility including buildings 2 and 3, on the South by Area 2, and on the west by Capitol Metals and ILM (Figure 2).

GEOLOGY AND HYDROGEOLOGY

Hydrogeologic setting of the Facility was determined mainly from reference to reports published by the U.S. Geological Survey and the California Department of Water Resources. The Facility is at approximately 50 feet mean sea level (MSL) elevation on the Torrance Plain, a Pleistocene-age marine surface. Near-surface sediments underlying the Facility are assigned to the Lakewood Formation and include marine and continental deposits of late Pleistocene age. Aquifers underlying the Facility include the Semiperched and Gage Aquifers within the Lakewood Formation and the Lynwood and Silverado Aquifers in the deeper San Pedro Formation. Previous groundwater investigations and monitoring at the Facility established that the uppermost groundwater

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is at 60 to 70 feet depth in the Semiperched Aquifer, with a hydraulic gradient to the south-southeast, measured at 3.5 feet per mile in late 1996.

Fifteen continuous core borings were drilled throughout the Facility during the Phase II Soil Characterization study. One is located in Area 2 and two are located in Area 6 (Figure 3). Extensive information regarding the soils within 50 feet below the ground surface (bgs) at the Facility was developed from the drilling and geologic logging in the study. Four distinct subsurface units were identified (Q1 through Q4). Three of these soil units correlated over the entire Facility (Q1, Q2, and Q3), while the fourth (Q4) pinches out on the northwest and dips below the depth drilled on the east. The uppermost soils at the Facility consist predominantly of clay and silt. These fine-grained soils are present to about 22 feet bgs on the west and thicken to about 45 feet on the east. Soils below these depths are predominantly sand and silty sand to the 50-foot maximum depth drilled.

FIELD PROGRAM

A Field Sampling Plan was developed based on the findings of the Phase I environmental site assessments of the Facility. The Plan identified the individual areas of potential concern and reviewed the history of the areas. Based on these data, specific analytical testing was proposed at each location. The Plan was reviewed and approved by the RWQCB and DTSC.

Fifty-two soil borings were drilled and 229 soil samples were collected for analysis in the locations investigated for the Phase II Soil Characterization of Parcel B. The soil borings were drilled with either direct hydraulic-push or hollow-stem auger drilling methods. Borings to 10 feet and 25 feet bgs were drilled and sampled by direct-push methods. Borings to 50 feet bgs were drilled by hollow-stem auger.

All soil samples were analyzed for volatile organic compounds (VOCs) and total recoverable petroleum hydrocarbons (TRPH) by EPA Methods 8260 and/or 8010/8020, and 418.1, respectively. Selected additional analyses were performed on an area-by-

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area basis and include total petroleum hydrocarbons by EPA Method 8015 modified, semi-volatile organic compounds (SVOCs) by EPA Method 8270 and Title 22 metals, including hexavalent chromium (EPA Methods 6010, 7196, and 7471), polychlorinated biphenyls (PCB) (EPA Method 8080), and pesticides (EPA Method 8080). Most of the samples were first analyzed on site for VOCs and TRPH by state-certified mobile laboratories. If the on-site mobile laboratory analyses detected total VOCs greater than 200 micrograms/kilogram (µg/kg), the samples were also analyzed in a state-certified off-site stationary laboratory for confirmation. As an additional quality assurance (QA) check, the off-site stationary laboratory also analyzed 10 percent of the samples for which the mobile laboratory reported VOCs and TRPH as not detected.

SUMMARY OF FINDINGS

Parcel B, which consists of Areas 2 and 6, was divided into areas of potential concern based on previous facility history. Each of the areas of potential concern were investigated individually. Area 2 was divided into five areas of potential concern (Figure 2):

- Tool Storage Yard
- Scrap Storage Yard
- Buildings 54, 55, and 56
- Area borders with LADWP Electrical Substation
- Area border with Montrose Chemical.

Area 6 was divided into two areas of potential concern (Figure 2):

- Area border with International Light Metals
- Parking Lot

None of the areas of potential concern investigated in Areas 2 and 6 were found to contain COPCs at levels such that they were designated areas of concern. Findings regarding the potential areas of concern are summarized below.

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AREA 2

Tool Storage Yard

The Tool Storage Yard is used to store master tools used to make aircraft parts. Most of the tools are composed of lead. However, this area did not contain lead in concentrations, distribution, or frequency of occurrence to be designated as an area of concern.

No VOCs were detected in this area. Petroleum hydrocarbons were detected at low concentrations in 25 of 53 soil samples. TRPH (418.1) was detected at concentrations less than 270 mg/kg in 23 of the samples. TRPH was detected at 1.5 feet bgs in boring 2-11B at 3,200 mg/kg and at 4 feet bgs in boring 2-15 at 6,000 mg/kg, but was not detected in the deeper samples from borings 2BB-2-11B and 2BB-2-15. Motor oil-like hydrocarbons (8015M) were detected in seven samples at concentrations less than 710 mg/kg, and at 4 feet bgs in boring 2-17 at 3,000 mg/kg. The only SVOCs detected were bis(2-ethylhexyl)-phthalate and phenol. Bis(2-ethylhexyl)-phthalate was detected at concentrations ranging from 120 μ g/kg to 270 μ g/kg in seven of 53 samples at depths ranging from 1 foot bgs to 10 feet bgs, and phenol was detected at 170 μ g/kg in the 1-foot bgs sample from boring 2-16.

Barium, chromium, cobalt, copper, nickel, vanadium, and zinc were detected at concentrations that appear typical of background values. Lead was detected in two borings, 2-16 and 2-11B at 1 foot to 2 feet bgs, respectively, at concentrations below 23 mg/kg, which is well below the TTLC of 1,000 mg/kg and less than ten times the STLC.

Scrap Storage Yard

The Scrap Storage Yard is used to store miscellaneous equipment and material, including a waste oil pump and roll-off bins that were used to collect and transport waste

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oil. However, this area did not contain petroleum hydrocarbons in concentrations high enough to be designated as an area of concern.

PCE was detected in boring 2-21 at a concentration of 7.8 μ g/kg and 5.2 μ g/kg in the 1-foot and 4-foot bgs samples, respectively. Petroleum hydrocarbons, including TRPH (418.1) and motor oil-like hydrocarbons (8015M), were detected at low concentrations ranging from 16 mg/kg to 450 mg/kg in 11 of 21 samples at shallow depths of 1 feet to 4 feet bgs. SVOCs were detected in four of 27 samples at concentrations of less than 230 μ g/kg. Certain SVOCs — benz(a)anthracene, chrysene, fluoranthene, phenanthrene, and pyrene — were detected in the 4-foot bgs sample from boring 2-21 at concentrations ranging from 150 mg/kg to 470 mg/kg. Bis(2-ethylhexyl)-phthalate was detected at concentrations ranging from 110 μ g/kg to 230 μ g/kg in four samples from borings 2-21, 2-27, and 2-30 at depths to 10 feet bgs.

Barium, chromium, cobalt, copper, nickel, vanadium, and zinc were detected at concentrations that appear typical of background values. Lead was reported in boring 2-28 at 8.6 mg/kg and 2.7 mg/kg in the 1-foot and 4-foot bgs samples. These lead concentrations are well below the TTLC of 1,000 mg/kg and less than ten times the STLC.

Buildings 54, 55 and 56

Buildings 54, 55 and 56 are used for office space and storage of forklifts, service vehicles, and tools. A transformer substation containing PCBs is located adjacent to Building 54. Staining around and on the transformer pad indicated that oil has leaked from the transformer. However, no PCBs were detected in the soil samples collected from this area.

No VOCs were detected in this area. Petroleum hydrocarbons, including TRPH (418.1) and motor oil-like hydrocarbons (8015M), were detected in the samples from boring 2-1 at concentrations ranging from 12 mg/kg to 150 mg/kg at depths ranging from 1 foot to 10 feet bgs.

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Area Borders with LADWP Electrical Substation

An LADWP electrical substation is located adjacent to the southeastern corner of Area 2. The electrical substation contains transformers that may contain PCBs. However, no PCBs were detected in the soil samples tested for the 2BB investigation of Parcel B of the BRC C-6 Facility.

No VOCs were detected in this area. Petroleum hydrocarbons, including TRPH (418.1) and motor oil-like hydrocarbons (8015M), were detected in seven of 24 samples at concentrations ranging from 11 mg/kg to 360 mg/kg. Six of these detections were at 1 foot or 4 feet bgs, and one detection (11 mg/kg) was at 25 feet bgs. The only SVOC detected in this area was bis(2-ethylhexyl)-phthalate, which was detected at 3,600 μ g/kg and 4,400 μ g/kg in the 15-foot and 25-foot bgs samples collected from boring 2-31, respectively.

Barium, chromium, cobalt, copper, nickel, vanadium, and zinc were detected at concentrations that appear typical of background values.

Area Border with Montrose Chemical

The Montrose Chemical facility is located adjacent to the eastern boundary of Area 2. Montrose is a known source of contamination to soil and groundwater and is currently on the National Priority List (NPL) due to releases of DDT and other chemicals to the environment. However, no DDT or other pesticides were detected in the samples tested for the 2BB investigation of Parcel B of the BRC C-6 Facility.

PCE and TCE were both detected in only one soil sample, 2-34 at a depth of 15 feet bgs and at a concentration of 6.7 μ g/kg and 5.1 μ g/kg, respectively. Chloroform was detected in the 15-foot bgs samples from borings 2-34 and 2-35 at 6.3 μ g/kg and 17 μ g/kg, respectively. Petroleum hydrocarbons as TRPH (418.1) were detected in four of 18 samples at concentrations ranging from 12 mg/kg to 56 mg/kg. The highest

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concentration (56 mg/kg) was detected at 1 foot bgs in boring 2-35, while concentrations of 12 mg/kg and 13 mg/kg were detected in boring 2-35 at 20 feet and 25 feet bgs,

respectively. The only SVOC detected in this area was bis(2-ethylhexyl)-phthalate,

which was detected at concentrations ranging from 120 μg/kg to 680 μg/kg in borings 2-

33 and 2-34 at depths ranging from 1 foot bgs to 20 feet bgs. No pesticides were

detected in this area.

Barium, chromium, cobalt, copper, nickel, vanadium, and zinc were detected at

concentrations that appear typical of background values.

AREA 6

Area Border with International Light Metals

ILM is located adjacent to the western boundary of Area 6. ILM is a RCRA site and a

known source of soil and groundwater contamination.

TCE was detected in 25 of 40 samples collected from all 6 borings drilled in this area at

concentrations ranging from 5.9 μg/kg to 52 μg/kg. Depending on the boring, it was

detected at depths ranging from 1 to 55 feet bgs. Petroleum hydrocarbons as TRPH

(418.1) were detected in three samples, two from boring 6-5 and one from boring 6-6, at

concentrations ranging from 23 mg/kg to 41 mg/kg, and at shallow depths ranging from

1.5 feet to 4.5 feet bgs. No PCBs were detected in this area.

Barium, chromium, cobalt, copper, nickel, vanadium, and zinc were detected at

concentrations that appear typical of background values.

Parking Lot

This area comprises most of Area 6 and has historically been primarily a parking lot.

BRC C-6 2BB Study Parcel B No VOCs were detected in this area. Petroleum hydrocarbons, including TRPH (418.1) and motor oil-like hydrocarbons (8015M), were detected in 17 of 61 samples at concentrations ranging from 16 mg/kg to 200 mg/kg, and at depths ranging from 1 foot to 10 feet bgs. No PCBs were detected in this area.

Barium, chromium, cobalt, copper, nickel, vanadium, and zinc were detected at concentrations that appear typical of background values.

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1.0 INTRODUCTION

Kennedy/Jenks Consultants performed a Phase II Soil Characterization of the Boeing Realty Corporation (BRC) C-6 Facility (Facility) in April and May, 1997. A Field Sampling Plan (FSP) was prepared for the soil characterization and reviewed and approved by the Regional Water Quality Control Board, Los Angeles Region (RWQCB), the lead agency, and the Department of Toxic Substance Control (DTSC).

This section provides a description of the general location of the Facility and Parcel B, which is comprised of Areas 2 and 6 of the Facility. The Section also presents the purpose of the Phase II Soil Characterization program.

1.1 C-6 Facility Location

The Facility is approximately 170 acres, located at 19503 South Normandie Avenue in Los Angeles, California (Figure 1). The Facility is bordered on the north by West 190th Street, on the east by railroad tracks and South Normandie Avenue, on the south by Montrose Chemical and residential properties, and on the west by Western Avenue, Capitol Metals, and International Light Metals (ILM).

Parcel B, which consists of Areas 2 and 6, occupies approximately 52 acres in the southwestern portion of the Facility. Area 2, comprising approximately 33 acres, is bordered on the north by Capitol Metals and Area 6, on the east by the Los Angeles Department of Water and Power (LADWP) electrical substation, former Montrose Chemical, and Jones Chemical, on the south by residential properties, and on the west by Western Avenue. Area 6, comprising approximately 19 acres, is bordered on the north by portions of the Facility including buildings 4, 11 13, 14 and 15, on the east by portions of the Facility including buildings 2 and 3, on the south by Area 2, and on the west by Capitol Metals and ILM (Figure 2).

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1.2 Purpose

The purpose of the Phase II Soil Characterization was to systematically identify and characterize the nature of the soils above groundwater and areas of concern throughout the Facility, and to support future site remediation, feasibility studies, groundwater investigations, and the ongoing risk assessment. The soil characterization included the physical properties of the soils, the subsurface distribution of the soil types, and the nature and extent of chemicals of potential concern (COPCs) within the soils.

2.0 AREAS 2 AND 6 DESCRIPTION

This section provides a history of the Facility and a description Areas 2 and 6. This section also presents a discussion of the regional and local geology and hydrogeology.

2.1 <u>Description and History of Areas of Investigation</u>

A review of aerial photographs indicated that the Facility was farmland prior to the 1940s (Kennedy/Jenks Consultants, March 1996). The Facility was first developed by the Defense Plant Corporation in 1941, as part of an aluminum reduction plant. The plant was operated by the Aluminum Company of America until late 1944 (Camp, Dresser & McKee, 1991). In 1948, the property was acquired by the Columbia Steel Company. In March 1952, the U.S. Navy purchased the property from the Columbia Steel Company and established Douglas Aircraft Company (DAC) as the contractor and operator of the Facility for the manufacturing of aircraft and aircraft parts. DAC purchased the Facility from the Navy in 1970 (Camp, Dresser & McKee, 1991). The Facility was transferred to BRC in 1996.

Areas 2 and 6 were investigated based on potential areas of concern and to support the ongoing risk assessment. The discussions that follow focus on the general uses of each area. Section 3.0 discusses the historical use of each building and potential area of concern within Areas 2 and 6 based on Phase 1 environmental site assessments conducted by Kennedy/Jenks Consultants in March 1996 and May 1997a.

2.2 Regional Geology And Hydrogeology

The geology and hydrogeology of the region surrounding the Facility were determined mainly from reference to reports published by the U.S. Geological Survey (USGS) (Poland and others, 1959) and the California Department of Water Resources (DWR), (1961). Reference also was made to previous reports prepared by Kennedy/Jenks Consultants for the Facility.

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The Facility is located on a broad plain at an elevation of approximately 50 feet MSL. The DWR and USGS define this area as the Torrance Plain, a Pleistocene-age marine surface and a subdivision of the Coastal Plain of Los Angeles and Orange Counties. The ground surface in this area is generally flat with an eastward gradient of about 20 feet per mile (less than one-half percent). Surface drainage is generally toward the Dominguez Channel, about a mile to the east. The Dominguez Channel, in turn, flows southeastward toward the Los Angeles and Long Beach Harbors in San Pedro Bay.

The surface sediments in this area are assigned to the Lakewood Formation (DWR, 1961), a unit defined to include essentially all of the upper Pleistocene sediments in the Los Angeles Coastal Plain area. The Lakewood Formation includes deposits of both marine and continental origin, representing stream transport and sedimentation along the Pleistocene marine plain. In the Facility area, the Lakewood Formation may include the Semiperched Aquifer, the Bellflower Aquiclude, and the Gage Aquifer. The Semiperched Aquifer includes deposits described as Terrace Cover (Poland et al. 1959). Extent and thickness of this unit is not rigorously defined, but appears to include the near-surface water-bearing units in the area of the Facility. The Bellflower Aquiclude is described as a heterogeneous mixture of continental, marine, and wind-blown sediments, mainly consisting of clays with sandy and gravely lenses (DWR, 1961). The base of the Bellflower Aquiclude is about 100 feet below sea level (about 150 feet bgs) in the Facility area. The Gage Aquifer is a water-bearing zone of fine to medium sand and gravel confined by the Bellflower Aquiclude. It is reported to be about 40 feet thick in the Facility area and is described as being of secondary importance as a water source (DWR, 1961).

The Lakewood Formation is underlain by the Lower Pleistocene San Pedro Formation, which continues to about 1,000 feet in depth in the Facility area. Major water-bearing zones within the San Pedro Formation are the Lynwood Aquifer and the Silverado Aquifer. These are reported to be at depths of about 300 and 500 feet, respectively, in the Facility area (DWR, 1961). The Silverado is an important groundwater source in the Coastal Plain and is considered a source of drinking water (DWR, 1961).

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2.3 Local Geology And Hydrogeology

2.3.1 Local Geology

The drilling program conducted during the Phase II Soil Characterization provided extensive information with regard to the sediments within the upper 50 feet at the Facility. The drilling program included 36 hollow-stem auger borings and 174 direct-push probes, totaling approximately 4,700 linear feet. The drilling program for Areas 2 and 6 included nine hollow-stem auger borings and 43 direct-push borings totaling about 1,046 linear feet. Boring locations are shown on Figure 2 and boring logs are in Appendix A.

To allow detailed examination of the subsurface soils, 15 borings at representative locations within the Facility were continuously sampled from the surface to 50 feet bgs. One of these core borings is located in Area 2 and two are located in Area 6 (Figure 3). The detailed logs from these borings were used to construct the generalized cross-sections that are presented in Figures 4 through 6. Logs from the other, shallower borings are consistent with the soil units shown on the generalized cross-sections.

Several distinctive soil units were recognized in the subsurface and can be correlated between borings, as shown on Figures 4 through 6. For convenience in this text, the subsurface soil units are informally designated Units Q1 through Q4.

Unit Q1: Unit Q1 is a layer of silty clay and sandy clay encountered at the surface or just below the pavement or engineered fill soils over the entire Facility. This clay is typically dark brown to dark reddish brown in color and medium stiff to hard. It has moderate to high plasticity and is classified as CL or CH under the Unified Soil Classification System (USCS). Unit Q1 has a uniform thickness of about 5 feet along the west side of the Facility. It thickens to about 22 feet on the northeast corner of the Facility.

Unit Q2: Unit Q2 comprises a sequence of interbedded clayey silt, fine sandy silt, and fine silty sand with minor lenses of silty clay. The predominant USCS classifications are ML and SM. The Unit Q2 soils are brown, olive brown, and reddish brown in color and

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are generally medium dense. Unit Q2 is about 17 to 20 feet thick and the base is about 22 to 25 feet bgs along the west side of the Facility. The unit thickens to about 30 feet at the east side of the Facility. The base of Unit Q2 also slopes eastward, and occurs at depths of 45 to 50 feet along the east side of the Facility.

Unit Q3: Unit Q3 is an interval of fine and very fine sand with only minor silt. Soils in this interval generally are classified as SP and SP-SM under the USCS. This soil unit includes distinctive beds containing abundant shell fragments. The sand is mainly light yellowish brown to light yellowish gray in color. It has generally massive structure, and commonly is described as being similar to beach sand. The sand is generally dense, but has essentially no cohesion.

Unit Q3 is more than 28 feet thick on the west side of the Facility, extending from about 22 feet bgs to below the 50-foot depth drilled at the northwest corner of the Facility. However, in the southern part of the Facility, Unit Q3 is interlayered with Unit Q4, a wedge of fine silty sand and fine sandy silt.

Unit Q4: Unit Q4 was observed in borings in the southwestern and central part of the Facility. It pinches out in the northwestern part of the area and is likely below the depth drilled on the east. Maximum thickness of this soil unit is about 17 feet, on the southwest. Unit Q4 mainly contains fine silty sand (SM) and clayey silt (ML) with thin interbeds of silty clay and fine sand. These soils are generally yellowish brown in color and are medium dense to dense.

2.3.2 Local Hydrogeology

The uppermost groundwater at the Facility appears to be under water-table conditions at depths of 60 to 70 feet. Regionally, this uppermost groundwater is probably considered part of the Semiperched Aquifer discussed previously and is separated from the deeper zones by the Bellflower Aquiclude (Kennedy/Jenks Consultants, 1997b).

Monitoring wells at the Facility are completed in two zones. Most of the wells are completed at or near the semi-perched aquifer, with screened intervals ranging from 60

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to 90 feet bgs. Two deeper wells, WCC-1D and WCC-3D, are completed in a deeper zone with screened intervals from 120 to 140 feet bgs (Woodward-Clyde Consultants, 1990).

Complete records of water-level measurements are included in the quarterly Groundwater Monitoring Summary Reports (Kennedy/Jenks Consultants, January 1997b). The hydraulic gradient in the uppermost groundwater is generally toward the south-southeast, toward a local low in the area of wells WCC-7S and WCC-12S. The December 1996 groundwater gradient was 6.6 x 10⁻⁶ ft/ft (3.5 ft/mile) (Kennedy/Jenks Consultants, 1997b).

Groundwater conditions at the Facility are known from previous investigations and from the quarterly groundwater monitoring program (Kennedy/Jenks Consultants, 1997b). Groundwater samples from 15 observation wells at the Facility have been sampled and analyzed on a quarterly basis since 1992. There are no groundwater monitoring wells located within Areas 2 and 6. The drilling for the Phase II Soil Characterization was entirely in the unsaturated zone and did not provide additional information on groundwater.

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3.0 PROGRAM DESIGN

This section provides the details of the Phase II Soil Characterization program design, the rationale for soil boring placement, and analytical testing on an area-by-area and building-by-building basis.

3.1 **Program Design**

The soil sampling program was designed to detect COPCs throughout the Facility and, as such, is conservative throughout (Table 1). Supplemental samples and/or analyses were added to the program, where appropriate, to provide high confidence that COPCs would be adequately characterized. As described in Section 2.1, Areas 2 and 6 contain portions that have been used for storage and portions that have been parking lots throughout the history of the Facility (Figure 2). Soil sampling locations were placed in known storage areas, previously identified potential areas of concern, on a sampling grid with appropriate spacing to cover open areas, and border areas of particular interest.

To best describe the subsurface soils, soil borings were nominally completed to three different depths: 10 feet, 25 feet, and 50 feet bgs. The 10-foot and 25-foot soil borings were completed by direct-push technology and the 50-foot soil borings were completed by hollow-stem auger. Further detail of the drilling methodologies is presented in Section 4.1. Detailed geologic boring logs were made of each soil boring and those from Areas 2 and 6 are presented in Appendix A. All Push borings were continuously cored in their upper 10 feet. In addition, a total of fifteen 50-foot soil borings were continuously cored to total depth to provide detailed soils data across the Facility.

Thirteen of the 15 50-foot core borings were drilled and completed at the beginning of the Facility-wide soils characterization prior to assigning the 2BB Study designation. This includes boring 2-11, 6-4, and 6-17 in Parcel B. Two 50-foot core borings were included near the end of the study to supplement the original 13 core borings and contain the 2BB Study designation (2BB-1-38 and 2BB-36-14).

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Field activities were initiated with selection of sampling locations, geophysical screening for underground obstructions, and coring of concrete paving to access subsurface soils. Supplemental geophysical screening and concrete coring were conducted during the drilling program when new borehole locations were included in the investigation.

Soil samples were collected from 1 foot, 4 feet, and 10 feet bgs in all borings. Where possible, the uppermost soil sample was collected from 6 inches bgs; however, in many instances a 6-inch sample was impractical due to either the deteriorated asphalt at the surface, fill, base materials for concrete, railroad ballast, or other surface disturbance. Soil samples were collected at 5-foot intervals below 10 feet depth in borings drilled to 25 feet bgs and on 10-foot intervals below 10 feet depth in 50 foot boreholes.

The program had one to three drilling rigs collecting soil samples each day and was designed to process approximately 50 to 60 soil samples per day.

Blank samples and confirmation analyses were used for QA in the field program. Daily rinsate blanks were used to check decontamination of sampling equipment. Daily travel blanks accompanied all samples shipped to the stationary laboratory. Ten percent of the samples showing non-detect results for EPA Methods 8260 and 418.1 from the onsite mobile laboratories were sent to the stationary laboratory for confirmatory analysis. And, EPA Method 8260 mobile, on-site laboratory results exceeding 200 micrograms per kilogram (μ g/kg) total VOCs were also sent to the stationary laboratory for confirmation analysis. Original laboratory reports are presented in Appendix B.

3.1.1 Sample Identification

Soil samples were identified with a unique boring number and depth using a predetermined nomenclature. For the Parcel B Soil Characterization, an example identification code is:

2BB-2-5-10

Where

2BB- study designation

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- 2- Area designation
- 5- boring number in that Area
- 10 nominal sample depth.

3.2 Rationale for Sampling Locations and Analytical Testing

The rationale for the sampling locations and analytical testing for each area of potential concern is based on a combination of the following factors:

- The locations of known past processes that used specific chemicals.
- The location of specific equipment of concern, such as electrical transformers, clarifiers, ASTs, USTs, and others.
- Locations that border areas of known or suspected contamination.
- Areas having no prior history of concern to provide a comprehensive data base on Facility soil conditions for use in future site remediation, feasibility studies, groundwater investigations, and risk assessment.

Sampling locations are shown on Figure 2. The following discussion presents a summary of sampling locations and analytical testing for Areas 2 and 6. Table 1 presents the overall soil sampling analytical program for Areas 2 and 6.

3.2.1 Area 2

Area 2 occupies approximately 33 acres in the southwestern portion of the Facility (Figure 1). Topography in Area 2 is essentially flat with an elevation of approximately 50 feet above mean sea level (MSL). The potential areas of concern within Area 2 include the tool storage yard, the scrap storage yard, Buildings 54 through 56, the borders with an LADWP electrical substation, and the border with Montrose Chemical (Figure 2). Area 2 contains railroad tracks that separate the tool storage yard from the scrap storage yard, and railroad spurs that divide the tool storage yard into north-south

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trending strips. Although most manufacturing operations at the Facility have been inactive for approximately four years, storage of master tools and scrap in Area 2 is still ongoing. A limited amount of assembly and activities related to warehousing currently continue and the railroad spurs are still active.

3.2.1.1 Tool Storage Yard

The Tool Storage Yard is used to store master tools used to make aircraft parts. The area that comprises the Tool Storage Yard is delineated by railroad tracks on the southern and eastern sides of Area 2 (Figure 2). Nine railroad spurs divide most of the tool yard into north-south trending strips, and are flanked on both sides by tools. Most of the tools are stored in wooden crates in a wide variety of sizes. Some of the larger tools are neither covered nor crated, and are lying on open ground. Most of the tools are composed of lead.

Three small buildings (numbers 54, 55, and 56) located near the gate to the yard are used for office space and storage of forklifts, service vehicles, and tools.

Seventeen soil borings (2BB-2-3 through 2BB-2-18) were drilled throughout the Tool Storage Yard. Sixteen were pushed to a depth of 10 feet bgs, and one (2BB-2-11B) was drilled to a depth of 50 feet bgs using a hollow-stem auger. Soil samples were collected according to the depth scheme presented in Table 1 and analyzed for VOCs (8260 or 8010/8020), petroleum hydrocarbons (418.1 and/or 8015M), Title 22 metals (6010, 7196, and 7471) and semivolatile organic compounds (SVOCs) (8270).

3.2.1.2 Scrap Storage Yard

The Scrap Storage Yard comprises about 100,000 square feet in a long, narrow strip on the southern portion at Area 2 and eastern portion of Area 2, separated from the Tool Storage Yard by the railroad tracks (Figure 2). Unused miscellaneous equipment and material used to be stored in the area and included a chromic acid dip tank and wire mesh dip tank baskets, trash compactor, cyclone vents, refrigerators, a large quantity of steel beams and pipes, cement parking pylons, pumps, sheet metal, cinder blocks, tires, and railroad rails.

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Nine soil borings (2BB-2-20 and 21 and 2BB-2-24 through 2BB-2-30) were drilled throughout the Scrap Storage Yard. These borings were pushed to a depth of 10 feet bgs. Soil samples were collected according to the depth scheme presented in Table 1 and analyzed for VOCs (8260 or 8010/8020), petroleum hydrocarbons (418.1 and/or 8015M), Title 22 metals (6010, 7196, and 7471) and semivolatile organic compounds (SVOCs) (8270).

3.2.1.3 Buildings 54, 55, and 56

Three small buildings, Buildings 54, 55 and 56, are located near the gate to the yard on the northern border of Area 2 (Figure 2). These buildings are used for office space and storage of forklifts, service vehicles, and tools. A transformer substation containing PCBs is located adjacent to Building 54. Staining around and on the transformer indicated that oil has leaked from the transformer.

Two soil borings, 2BB-2-1 and 2BB-2-2, were drilled in this location. Both were pushed to a depth of 10 feet bgs. Soil samples were collected according to the depth scheme presented in Table 1 and analyzed for VOCs (8260 or 8010/8020), petroleum hydrocarbons (418.1 and/or 8015M), Title 22 metals (6010, 7196, and 7471), and PCBs (8080).

3.2.1.4 Area Borders with LADWP Electrical Substation

A LADWP electrical substation is located adjacent to the southeastern corner of Area 2 and borders the Scrap Storage Area (Figure 2). The electrical substation contains transformers that may contain PCBs.

Four borings (2BB-2-22, -23, -31, and -32) were drilled along the borders with the LADWP electrical substation. All borings were pushed to 25 feet bgs. Soil samples were collected according to the depth scheme presented in Table 1 and analyzed for VOCs (8260 or 8010/8020), petroleum hydrocarbons (418.1 and/or 8015M), Title 22 metals (6010, 7196, and 7471), semivolatile organic compounds (SVOCs) (8270) and PCBs (8080).

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3.2.1.5 Area Border with Montrose Chemical

The Montrose Chemical facility is located adjacent to the eastern boundary of Area 2 and borders the eastern end of the Tool Storage Yard (Figure 2). Montrose is a known source of contamination to soil and groundwater and is currently on the National Priority List (NPL) due to the release of DDT and other chemicals to the environment.

Three borings (2BB-2-33 through 2BB-2-35) were drilled along the border with the Montrose Chemical Facility. The borings were pushed to 25 feet bgs. Soil samples were collected according to the depth scheme presented in Table 1 and analyzed for VOCs (8260 or 8010/8020), petroleum hydrocarbons (418.1 and/or 8015M), Title 22 metals (6010, 7196, and 7471), semivolatile organic compounds (SVOCs) (8270) and pesticides (8080).

3.2.2 Area 6

Area 6 occupies approximately 19 acres in the western portion of the Facility immediately north of Area 2 (Figure 1). Topography in Area 6 is essentially flat with an elevation of approximately 50 feet above mean sea level (MSL). Area 6 is comprised of a parking lot with active railroad tracks along the southwestern and western border. Area 6 is divided into two potential areas of concern: Area Border with ILM and the Parking Lot (Figure 2).

3.2.2.1 Area Border with International Light Metals

Area 6 borders ILM to the west, a RCRA site with known soil and groundwater contamination (Geraghty & Miller, 1996). Railroad tracks are located along the border to the west (Figure 2).

Six borings, 2BB-6-1 through 2BB-6-6, were drilled along the border with the ILM. The borings were drilled to 50 feet bgs using a hollow-stem auger. Soil samples were collected according to the depth scheme presented in Table 1 and analyzed for VOCs

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(8260 or 8010/8020), petroleum hydrocarbons (418.1 and/or 8015M), Title 22 metals (6010, 7196, and 7471), and PCBs (8080). Supplemental continuous core boring, 6-4, was drilled at allow detailed examination of the subsurface soils. Soil samples were not collected for laboratory analysis from this boring.

3.2.2.2 Parking Lot

This area comprises most of Area 6 and has historically been primarily a parking lot (Figure 2).

Ten borings were drilled throughout the area on approximately 200 to 300 foot spacings. Nine of the borings (2BB-6-8 through 2BB-6-16) were pushed to 25 feet bgs. One boring (2BB-6-17) was drilled to 50 feet bgs using a hollow-stem auger. Soil samples were collected according to the depth scheme presented in Table 1 and analyzed for VOCs (8260 or 8010/8020), petroleum hydrocarbons (418.1 and/or 8015M), Title 22 metals (6010, 7196, and 7471), and PCBs (8080).

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4.0 SOIL SAMPLING AND ANALYTICAL METHODS

This section provides the details of the borehole drilling and sampling methods, sample handling and the sample analytical program including QA/QC. Two hundred twenty-nine samples were collected in the field for laboratory analysis for the Phase II Soil Characterization of Parcel B. The field work was conducted during the period from 1 April through 7 May 1997. Areas 2 and 6 soil sampling locations are illustrated on Figure 2.

To accomplish the Phase II Soil Characterization objectives and document proper protocol for the work, an agency-approved Field Sampling Plan (FSP) was prepared and reviewed with field staff prior to initiating field work. Following the FSP, drilling and sampling methods were conducted in accordance with Kennedy/Jenks Consultants' Standard Operating Guides included in Appendix C. The Guides incorporate industry professional standards for routine sampling, and are designed to meet general regulatory agency requirements. A Site Health and Safety Plan was also prepared and reviewed with field staff prior to conducting field activities. Field safety meetings were conducted with Kennedy/Jenks Consultants and subcontractor staff at the beginning of each day to review physical and chemical hazards and emergency procedures related to the work.

4.1 **Drilling and Soil Sampling**

Field activities were initiated with selection of sampling locations, geophysical screening for underground obstructions, and coring of concrete paving to access subsurface soils. Supplemental geophysical screening and concrete coring were conducted during the drilling program when new borehole locations were included in the investigation.

Sampling was accomplished using direct-push, limited access direct-push, and hollow-stem auger drilling methods. Direct-push drilling was used on all 10-foot and 25-foot soil borings. The push technology uses a truck-mounted or portable hydraulically driven sampler or core barrel that allows penetration and standard sampling without the generation of drill cuttings. The sampler for the push tool was fitted with 2-foot-long, 1-

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inch-diameter Tenite sleeves. Minimal cuttings were generated using this equipment. The boreholes were backfilled with a cement-bentonite grout and the surface capped with original material (e.g., concrete, asphalt or native soil). A total of 43 borings throughout Areas 2 and 6 were drilled and sampled using this equipment.

A CME-85 hollow-stem auger drilling rig was used to drill and sample the 50-foot soil borings. Sampling was conducted using a standard split-spoon sampler fitted with 2 1/2-inch-diameter, 6-inch-long brass sleeves. Cuttings from these borings were drummed and the holes were backfilled with a cement-bentonite grout and the surface capped with original material. A total of nine borings throughout Parcel B were drilled and sampled using this technique.

At each of the soil sampling locations, the soil types encountered were logged using the standard Unified Soil Classification System (USCS) and Munsell Color Chart notation. Boring logs are included in Appendix A.

Soil cuttings from hollow-stem auger boreholes were labeled, inventoried, and stored in drums at the Facility for later disposal.

4.2 Sample Handling

Soil samples were collected in Tenite, stainless steel, or brass sleeves and then covered with TeflonTM sheets, capped, labeled, and temporarily stored in ice-cooled containers. For each sampling interval, two or three sleeves (depending on length) were collected for laboratory analysis, one for each of the two mobile laboratories on location and one for the off-site laboratory. Samples were identified with the boring number and depth using the predetermined nomenclature presented in Section 3.1.1.

Samples were immediately labeled, placed in ice-cooled, insulated containers upon collection and transported to the on-site mobile laboratories at the completion of a boring, or transferred to the off-site laboratory by courier at the end of each day. Sample custody was maintained by the field sampler or field supervisor until transferred to one of the laboratories. Sample custody was documented on standard chain-of-custody

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forms. Chain-of-custody forms are included with the laboratory reports in Appendix B. (Please refer to Appendix B of the Parcel A, Phase II Soil Characterization Report, transmitted in July 1997, for laboratory analytical reports.)

4.3 Sample Analytical Program

Analytical work was conducted by California-certified laboratories using standard EPA test methods and appropriate state-required modifications. Soil samples were analyzed daily in two on-site mobile laboratories. One lab was equipped with two gas chromatography/mass spectrometry (GC/MS) systems with autosamplers capable of performing EPA Method 8260 for VOCs, while a second on-site mobile laboratory analyzed samples by EPA Method 418.1 and EPA Modified Method 8015. Soil samples were also taken to an off-site stationary laboratory daily by courier for analyses of VOCs and other COPCs, such as semi-volatile organic compounds (SVOCs), metals including hexavalent chromium, PCBs, and others. The off-site stationary laboratory also performed QA/QC checks of the on-site mobile laboratory detections.

Analytical methods were selected for COPCs based on the Phase I Preliminary environmental site assessments findings (Kennedy/Jenks Consultants, 1996, 1997a). Analytical methods selected and the number of samples analyzed for each boring are detailed in Table 1 and summarized below:

- All samples, except as noted, were analyzed for VOCs, including gasoline by an onsite mobile laboratory by EPA Method 8260. A limited number of samples collected
 by the limited access direct-push method were analyzed for VOCs and TRPH at the
 off-site stationary laboratory by EPA Methods 8010/8020 and 418.1. These samples
 were collected near the end of the field program after the on-site mobile laboratories
 had left the Facility.
- All samples were analyzed for petroleum hydrocarbons by an on-site mobile laboratory by EPA Method 418.1 for TRPH. TRPH detections were also analyzed in the mobile laboratory for hydrocarbon speciation by EPA Method 8015 modified.

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- Samples collected at locations with potential metals concerns were analyzed by an off-site stationary laboratory by EPA Methods 6010, 7196, and 7471.
- Samples collected at locations with potential PCB concerns were analyzed by an offsite stationary laboratory by EPA Method 8080.
- Samples collected at locations with potential pesticide concerns were analyzed by an off-site stationary laboratory by EPA Method 8080.
- Ten percent of the on-site mobile laboratory non-detect results by EPA Method 8260 for VOCs were also analyzed by the off-site stationary laboratory as a QA/QC check.
- Ten percent of the mobile laboratory non-detect results by EPA Method 418.1 for TRPH were also analyzed by the off-site stationary laboratory as a QA/QC check.
- As an additional QA/QC check, all samples from four soil borings, 2BB-6-1 through 2BB-6-4, were analyzed for VOCs by EPA Method 8260 and TRPH by EPA Method 418.1 in both the on-site mobile and off-site stationary laboratories.
- Samples with Total VOCs greater than 200 µg/kg detected by EPA Method 8260 in the on-site mobile laboratory were also analyzed for VOCs at the off-site stationary laboratory for confirmation.

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5.0 INVESTIGATION RESULTS

This section presents the results of the Phase II Soil Characterization of Parcel B. The data are discussed by areas in the same order presented in Section 3.0. Each discussion begins with a brief summary of the specific borings associated with each area and the analytical tests performed.

The sections are sub-divided into organic and inorganic data for each location investigated. Organics include the results of analyses for VOCs, petroleum hydrocarbons, SVOCs, PCBs, and pesticides, while the inorganic section covers the results of analyses for Title 22 metals. Figures 7A through 7G and 8A through 8G present data for trichloroethene (TCE), and tetrachloroethene (PCE), respectively and Figures 9A-G, and 10A-G present data for total chromium and lead, respectively. Each series of figures includes seven groups, A through G, that show constituent concentrations detected at the following respective depths: 1 foot, 4 feet, 10 feet, 15 to 20 feet, 25 to 30 feet, 40 feet, and 50 feet bgs. These compounds and metals were selected as representing the most important COPCs detected in Areas 2 and 6 based on the known processes that operated in the area.

Specific Facility-wide ranges and average values for metals are presented in Table 2. References cited for the common range of background metals concentrations in soil include:

- Lindsay, Willard L., 1979, "Chemical Equilibria in Soils," John L. Willey & Sons, New York, New York.
- Shacklette, H.T., and Boerngen, J.G., 1984, "Element Concentrations in Soils and Other Surficial Materials in the Conterminous United States," USGS Professional Paper 1270, U.S. Government Printing Office, Washington, D.C.

Table 3 provides a summary of the VOC results from analyzes performed by the on-site mobile laboratory. Table 4 provides TRPH and TPH results from the mobile laboratory.

Table 5 presents the results of the SVOC analyses. Overall, as shown in Table 6, there BRC C-6 2BB Study

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were seven background metals detected in all soil samples analyzed: 1) barium, 2) total chromium, 3) cobalt, 4) copper, 5) nickel, 6) vanadium, and 7) zinc.

5.1 Area 2

Thirty-five soil borings were drilled and 128 soil samples were analyzed at five potential areas of concern in Area 2 (Figure 2). The results are detailed in the following subsections. Distribution of chemical detections by depth for TCE, PCE, total chromium, and lead are presented in Figures 7 through 10.

5.1.1 Tool Storage Yard

Seventeen soil borings were drilled throughout the Tool Storage Yard. Sixteen were pushed to a depth of 10 feet bgs, and one boring (2BB-2-11B) was drilled to a depth of 50 feet bgs. Soil samples were collected according to the depth scheme presented in Table 1 and analyzed for VOCs (8260 or 8010/8020), petroleum hydrocarbons (418.1 and/or 8015M), Title 22 metals (6010, 7196, and 7471) and semivolatile organic compounds (SVOCs) (8270).

5.1.1.1 Organics

No VOCs exceeded the detection limit of 5 μ g/kg in the samples from the Tool Storage Yard (Table 3).

Petroleum hydrocarbons were detected in 25 soil samples collected from 12 borings. In most borings TRPH (418.1) was detected at concentrations less than 270 mg/kg (Table 4). TRPH was detected at 3,200 mg/kg in the 1.5-foot bgs sample from boring 2BB-2-11B and at 6,000 mg/kg in the 4-foot bgs sample from boring 2BB-2-15. Petroleum hydrocarbons were not detected in the deeper samples from these borings. Motor oil-like hydrocarbons (8015M) were detected in eight of 25 samples that contained TRPH (Table 4). Seven samples contained motor oil-like hydrocarbons at concentrations ranging from 11 to 710 mg/kg. The 4-foot bgs sample from boring 2BB-2-17 contained motor oil-like hydrocarbons at 3,000 mg/kg.

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Bis(2-ethylhexyl)-phthalate and phenol were the only SVOCs detected in samples from the Tool Storage Yard Area (Table 5). Bis(2-ethylhexyl)-phthalate was detected at concentrations ranging from 120 μ g/kg to 270 μ g/kg in seven samples from borings 2BB-2-6, -7, -10, -11B, -14, and -16. Phenol was detected at 170 μ g/kg in the 1-foot bgs sample from boring 2BB-2-16.

5.1.1.2 Inorganics

The metals analyses were generally typical of the soils in this area. Barium, chromium, cobalt, copper, nickel, vanadium, and zinc were detected at concentrations that appear typical of background values (Tables 2 and 6). Lead was reported at a concentration of 7.0 mg/kg in the 2-foot bgs sample from boring 2BB-2-11B and 23 mg/kg in the 1-foot sample from boring 2BB-2-16. These lead concentrations are well below the TTLC of 1,000 mg/kg and less than ten times the 5.0 mg/l STLC (Table 2).

5.1.2 Scrap Storage Yard

Nine soil borings were drilled throughout the Scrap Storage Yard. These were pushed to a depth of 10 feet bgs. Soil samples were collected according to the depth scheme presented in Table 1 and analyzed for VOCs (8260 or 8010/8020), petroleum hydrocarbons (418.1 and/or 8015M), Title 22 metals (6010, 7196, and 7471) and semivolatile organic compounds (SVOCs) (8270).

5.1.2.1 Organics

The only VOC detected in the Scrap Storage Yard area was PCE, which was detected at 7.8 μ g/kg and 5.2 μ g/kg in the 1-foot bgs and 4-foot bgs samples respectively from boring 2BB-2-21 (Table 3).

Petroleum hydrocarbons at low concentrations were detected in this area. TRPH (418.1) was detected in eleven soil samples collected from five borings at

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concentrations ranging from 16 mg/kg to 450 mg/kg (Table 4). Five samples contained motor oil-like hydrocarbons (8015M) at concentrations ranging from 37 mg/kg to 280 mg/kg.

Several SVOCs (Table 5) that are coal-tar derivatives were detected at low concentrations in the 4-foot bgs sample from boring 2BB-2-21. They include Benz(a)anthracene (170 μ g/kg), Chrysene (150 μ g/kg), Fluoranthene (470 μ g/kg), Phenanthrene (320 μ g/kg), and Pyrene (300 μ g/kg).

Bis(2-ethylhexyl)-phthalate was the only SVOC detected in samples from more than one boring. Bis(2-ethylhexyl)-phthalate was detected at concentrations ranging from 110 μg/kg to 230 μg/kg in four samples from borings 2BB-2-21, -27, and -30.

5.1.2.2 Inorganics

The metals analyses were generally typical of the soils in this area. Barium, chromium, cobalt, copper, nickel, vanadium, and zinc were detected at concentrations that appear typical of background values (Tables 2 and 6). Lead was reported at concentrations of 8.6 mg/kg and 2.7 mg/kg in the 1-foot bgs and 4-foot bgs samples respectively from boring 2BB-2-28. These lead concentrations are well below the TTLC of 1,000 mg/kg and less than ten times the 5.0 mg/l STLC (Table 2).

5.1.3 Buildings 54, 55, and 56

Two soil borings, 2BB 2-1 and 2BB-2-2, were drilled in this location. Both were pushed to a depth of 10 feet bgs. Soil samples were collected according to the depth scheme presented in Table 1. Samples from boring 2BB-2-1 were analyzed for VOCs (8260 or 8010/8020), petroleum hydrocarbons (418.1 and/or 8015M), and PCBs (8080). Samples from boring 2BB-2-2 were analyzed for PCBs only.

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5.1.3.1 Organics

No VOCs exceeded the detection limit of 5 $\mu g/kg$ in the samples from this area (Table 3).

Petroleum hydrocarbons were detected in all three samples from boring 2-1 (Table 4). TRPH (418.1) was detected at concentrations ranging from 61 mg/kg to 150 mg/kg. Motor oil-like hydrocarbons (8015M) were detected in the 4-foot bgs sample from boring 2BB-2-1 at 12 mg/kg.

No PCBs were detected in the soil samples collected from this area (Table 7).

5.1.4 Area Borders with LADWP Electrical Substation

Five of the borings drilled in the Scrap Storage Yard were located along the borders with the LADWP electrical substation. All four of the borings (2BB-2-22, -23, -31, and -32) were pushed to 25 feet bgs. Soil samples were collected according to the depth scheme presented in Table 1 and analyzed for VOCs (8260 or 8010/8020), petroleum hydrocarbons (418.1 and/or 8015M), Title 22 metals (6010, 7196, and 7471), semivolatile organic compounds (SVOCs) (8270), and PCBs (8080).

5.1.4.1 Organics

No VOCs exceeded the detection limit of 5 $\mu g/kg$ in the samples from this area (Table 3).

Petroleum hydrocarbons were detected in the 1-foot bgs and 4-foot bgs samples from borings 2BB-2-23, and -24, the 1-foot bgs samples from 2BB-2-31 and -32, and the 25-foot bgs sample collected from boring 2BB-2-32 (Table 4). TRPH (418.1) was detected at concentrations ranging from 11 mg/kg to 360 mg/kg. Motor oil-like hydrocarbons (8015M) were detected in the 4-foot bgs samples from 2BB-2-24 and -23 at 66 mg/kg and 98 mg/kg, respectively.

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Bis(2-ethylhexyl)-phthalate was the only SVOC detected in samples from this area (Table 5). It was detected at 3,600 μ g/kg and 4,400 μ g/kg in the 15-foot and 25-foot bgs samples collected from boring 2BB-2-31, respectively.

No PCBs were detected in the soil samples collected from this area (Table 7).

5.1.4.2 Inorganics

The metals analyses were generally typical of the soils in this area. Barium, chromium, cobalt, copper, nickel, vanadium, and zinc were detected at concentrations that appear typical of background values (Tables 2 and 6).

5.1.5 Area Border with Montrose Chemical

Three of the borings drilled in the Scrap Storage Yard were located along the border with the Montrose Chemical Facility. The borings were pushed to 25 feet bgs. Soil samples were collected according to the depth scheme presented in Table 1 and analyzed for VOCs (8260 or 8010/8020), petroleum hydrocarbons (418.1 and/or 8015M), Title 22 metals (6010, 7196, and 7471), semivolatile organic compounds (SVOCs) (8270) and pesticides (8080).

5.1.5.1 Organics

PCE, TCE, and chloroform exceeded the detection limit of 5 μ g/kg in the samples from this area (Table 3). PCE and TCE were both detected in only the 15-foot bgs sample from boring 2BB-2-34 at 6.7 μ g/kg and 5.1 μ g/kg, respectively, Chloroform was detected in the 15-foot bgs samples from borings 2BB-2-34 and -35 at 6.3 μ g/kg and 17 μ g/kg, respectively.

Petroleum hydrocarbons were detected in the 1-foot bgs sample from boring 2BB-2-34 and the 1-foot, 20-foot, and 25-foot bgs samples from boring 2BB-2-35 (Table 4). TRPH (418.1) was detected at concentrations ranging from 12 mg/kg to 56 mg/kg.

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Bis(2-ethylhexyl)-phthalate was the only SVOC detected in samples from this area (Table 5). It was detected at concentrations ranging from 120 μ g/kg to 680 μ g/kg in five samples.

Pesticides were not detected in any samples collected from this area (Table 8).

5.1.5.2 Inorganics

The metals analyses were generally typical of the soils in this area. Barium, chromium, cobalt, copper, nickel, vanadium, and zinc were detected at concentrations that appear typical of background values (Tables 2 and 6).

5.2 Area 6

A total of 17 soil borings were drilled and 101 soil samples were analyzed in two potential areas of concern in Area 6 (Figure 2). The results are detailed in the following subsections. Distribution of chemical detections by depth for TCE, PCE, total chromium, and lead are presented in Figures 7 through 10.

5.2.1 Area Border with International Light Metals

Six borings, 2BB-6-1 through 2BB-6-6, were drilled along the border with the ILM. The borings were drilled to 50 feet bgs. Soil samples were collected according to the depth scheme presented in Table 1 and analyzed for VOCs (8260 or 8010/8020), petroleum hydrocarbons (418.1 and/or 8015M), Title 22 metals (6010, 7196, and 7471), and PCBs (8080).

5.2.1.1 Organics

TCE was the only VOC that exceeded the detection limit of 5 μ g/kg in the samples from this Area (Table 3). TCE was detected in 25 samples collected from all 6 borings drilled

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in this area at concentrations ranging from 5.9 μ g/kg to 52 μ g/kg. Depending on the boring, it was detected at depths ranging from 1 to 55 feet bgs.

Petroleum hydrocarbons were detected in the 2-foot bgs and 4.5 foot bgs samples from boring 2BB-6-5, and the 1.5 foot bgs sample from boring 2BB-6-6 (Table 4). TRPH (418.1) was detected at concentrations ranging from 23 mg/kg to 41 mg/kg.

No PCBs were detected in the soil samples collected from this area (Table 7).

5.2.1.2 Inorganics

The metals analyses were generally typical of the soils in this area. Barium, chromium, cobalt, copper, nickel, vanadium, and zinc were detected at concentrations that appear typical of background values (Tables 2 and 6).

5.2.2 Parking Lot

Ten borings were drilled throughout the area on approximately 200 to 300 foot spacings (Figure 2). Nine of the borings, 2BB-6-8 through 2BB-6-16, were pushed to 25 feet bgs. One boring (2BB-6-17) was drilled to 50 feet bgs using a hollow-stem auger. Soil samples were collected according to the depth scheme presented in Table 1 and analyzed for VOCs (8260 or 8010/8020), petroleum hydrocarbons (418.1 and/or 8015M), Title 22 metals (6010, 7196, and 7471), and PCBs (8080).

5.2.2.1 Organics

No VOCs exceeded the detection limit of 5 μ g/kg in the samples from this area (Table 3).

Petroleum hydrocarbons were detected in 17 soil samples collected from eight borings. TRPH (418.1) was detected at concentrations ranging from 16 mg/kg to 200 mg/kg (Table 4). Six samples contained motor oil-like hydrocarbons (8015M) at concentrations ranging from 34 mg/kg to 110 mg/kg.

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No PCBs were detected in the soil samples collected from this area (Table 7).

5.2.2.2 Inorganics

The metals analyses were generally typical of the soils in this area. Barium, chromium, cobalt, copper, nickel, vanadium, and zinc were detected at concentrations that appear

typical of background values (Tables 2 and 6).

5.3 Quality Assurance Results

This section includes the results of the field quality assurance (QA) sample analysis, travel blanks and equipment rinsate blanks, VOC and TRPH QA results, and the QA check results on mobile laboratory total VOC concentrations greater than 200 µg/kg. In

addition, the RWQCB performed audits of the mobile and stationary laboratories.

5.3.1 Field QA

Daily travel blanks were analyzed for VOCs (8260) to monitor the possibility of outside contamination of soil samples during transport to the stationary laboratory. Travel blank analytical testing resulted in no detections, indicating the samples were not impacted

during transport (Appendix B).

Daily equipment rinsate blanks were analyzed to monitor the potential cross-contamination of soil samples by the sampling equipment. All laboratory analytical

results were non-detect, indicating proper cleaning of field equipment between samples

(Appendix B).

5.3.2 Laboratory QA

5.3.2.1 QA Analysis for VOCs

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As a QA check on the results of the on-site mobile laboratory, 10 percent of non-detect EPA Method 8260 results were also analyzed at the off-site stationary laboratory. In addition, samples from borings 2BB-6-1 through 2BB-6-4 were analyzed for VOCs at both the on-site mobile laboratory and the off-site stationary laboratory. Comparison of the data is presented in Table 9.

The results of the 10% non-detected QA analysis by the off-site stationary laboratory agreed with the results of the on-site mobile laboratory. The results of the analyses of soil samples from borings 2BB-6-1 through 2BB-6-4 differed between the on-site mobile laboratory and the off-site stationary laboratory. The on-site mobile laboratory detected TCE in 17 of the 26 soil samples at concentrations at or below 52 μ g/kg, while TCE was detected in only two of the 26 soil samples by the off-site stationary laboratory. TCE was detected by the off-site stationary laboratory in 2BB-6-3-1 at 15 μ g/kg and by the on-site mobile laboratory at 23 μ g/kg. The other TCE detection (2BB-6-2-1) by the off-site stationary laboratory was in a sample in which TCE was not detected by the on-site mobile laboratory. In addition, Toluene was detected in two soil samples in concentrations at or below 3.3 μ g/kg, and PCE in one sample at 16 μ g/kg by the off-site stationary laboratory only.

All of these VOC concentrations are low. The highest concentration detected was 52 μ g/kg and the average was 18 μ g/kg. This variability is not unreasonable when comparing the results of analyses of separate soil sample sleeves from the same sampling location. Due to the heterogeneous nature of the sediments, chemical concentrations could vary widely, even within the same 6-inch sample sleeve. The QA data show acceptable correlation between the analyses and substantiate the on-site mobile laboratory results.

5.3.2.2 QA Analysis for TRPH

As a QA check on the results of the on-site mobile laboratory, 10 percent of non-detect EPA Method 418.1 results were analyzed at the off-site stationary laboratory. In addition, samples from borings 2BB-6-1 through 2BB-6-4 were analyzed for TRPH at

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both the on-site mobile laboratory and the off-site stationary laboratory. Comparison of the data is presented in Table 10.

The off site stationary laboratory results showed detections of TRPH by EPA Method 418.1 in 21 out of 41 samples (~50 percent). However, the on-site mobile laboratory used a screening detection limit of 20 mg/kg during the beginning of the program and then, on request by Kennedy/Jenks Consultants, changed to a detection limit of 10 mg/kg. The off-site stationary laboratory used a detection limit of 8 mg/kg. One of the 21 sample detections (2BB-2-22-25) from the off-site stationary laboratory is below the comparable detection limit of the on-site mobile laboratory, and three samples are right on the 10 mg/kg detection limit. This leaves 17 out of 41 samples (41 percent) that had TRPH detections by the off-site stationary laboratory, where the on-site mobile laboratory had non-detect. All of these samples had detections less than 73 mg/kg TRPH. This variability is not unreasonable when comparing the results of analyses of separate soil sample sleeves from the same sampling location. Due to the heterogeneous nature of the sediments, chemical concentrations could vary widely, even within the same 6-inch sample sleeve.

Because of the difficulty inherent in analyzing soil samples, the QA data are interpreted to show acceptable correlation between the analyses and substantiate the on-site mobile laboratory results.

5.3.3 QA Analysis of Total VOC>200 μg/kg

The purpose of the QA analysis of total VOC>200 μ g/kg was to confirm the on-site mobile laboratory screening results. However, since none of the results for total VOCs were greater than 200 μ g/kg, no samples from Areas 2 and 6 were tested for VOCs by the off-site stationary laboratory.

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6.0 CONCLUSIONS

The Phase II Soil Characterization of Parcel B was completed according to the Field Sampling Plan (FSP) that was developed from the Phase I environmental site assessments of the Facility. The data generated during this program will provide support for future site remediation, feasibility studies, groundwater investigations, and risk assessment, if necessary.

Parcel B is comprised of Areas 2 and 6, which were divided into areas of potential concern. Each of the areas of potential concern were investigated individually. Area 2 was divided into five areas of potential concern:

- Tool Storage Yard
- Scrap Storage Yard
- Buildings 54, 55, and 56
- Area Borders with LADWP Electrical Substation
- Area Border with Montrose Chemical

None of the areas of potential concern investigated in Area 2 were found to contain COPCs at levels such that they were designated areas of actual concern.

Area 6 was divided into two areas of potential concern:

- Area Border with International Light Metals
- Parking Lot

Neither of the areas of potential concern investigated in Area 6 were found to contain COPCs at levels such that they were designated areas of actual concern.

This section of the report begins with a brief description of the field program (Section 6.1), followed by a summary of subsurface soil conditions at the Facility (Section 6.2). Findings regarding each of the five areas of potential concern in Area 2 are summarized

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in Section 6.3. Findings regarding the two areas of potential concern in Area 6 are summarized in Section 6.4.

6.1 Field Program

The field program included drilling and geologic logging of 52 soil borings and collecting 229 soil samples in Areas 2 and 6. The soil samples were analyzed for the COPCs that could be present in each area of potential concern. The samples were analyzed for VOCs and petroleum hydrocarbons by an on-site state-certified laboratory. Selected samples also were analyzed at an off-site state-certified stationary laboratory for one or more additional parameters, including, but not limited to, SVOCs, PCBs, and metals.

The QA program included blank samples and confirmation analyses of selected soil samples. Analyses of the blank samples showed no indication that samples collected were inadvertently contaminated. Confirmation analyses at a stationary laboratory supported the mobile laboratory analyses. In addition, both the mobile and stationary laboratories were audited by the RWQCB for compliance with analysis procedure methods.

6.2 Subsurface Soils

Extensive information regarding the soils within 50 feet bgs at the Facility was developed from the drilling and geologic logging in the Phase II Soil Characterization. Four distinct subsurface units were identified. Three of these were correlated over the entire Facility, while the fourth pinches out on the northwest and dips below the depth drilled on the eastern portion of the property. The uppermost soils at the Facility consist predominantly of clay and silt. These fine-grained soils are present to about 22 feet bgs on the west and thicken to about 45 feet bgs on the east. Soils below these depths are predominantly sand and silty sand to the 50-foot maximum depth drilled.

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6.3 Summary of Findings - Area 2

Analysis of the results of the Phase II Soil Characterization indicated there are no areas of concern in Area 2. Area 2 was divided into five areas of potential concern:

- Tool Storage Yard
- Scrap Storage Yard
- Buildings 54, 55, and 56
- Area Borders with LADWP Electrical Substation
- Area Border with Montrose Chemical.

None of these five areas of potential concern investigated were found to contain COPCs at levels such that they were designated areas of concern. The findings for each of these potential areas of concern are summarized below.

6.3.1 Tool Storage Yard

The Tool Storage Yard is used to store master tools used to make aircraft parts. Most of the tools are composed of lead. However, this area did not contain lead at concentrations high enough to be designated as an area of concern.

No VOCs were detected in this area.

Petroleum hydrocarbons were detected at low concentrations in 25 of 53 soil samples. TRPH (418.1) was detected at concentrations less than 270 mg/kg in 23 of the samples. TRPH (418.1) was detected at 1.5 feet bgs in boring 2-11B at 3,200 mg/kg and at 4 feet bgs in boring 2-15 at 6,000 mg/kg, but was not detected in the deeper samples from these same borings. Motor oil-like hydrocarbons (8015M) were detected in seven samples at concentrations less than 710 mg/kg, and at 4 feet bgs in boring 2-17 at 3,000 mg/kg.

The only SVOCs detected were bis(2-ethylhexyl)-phthalate and phenol.

Bis(2-ethylhexyl)-phthalate was detected at concentrations ranging from 120 μg/kg to

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6-3

 $270 \mu g/kg$ in seven of 53 samples at depths ranging from 1 foot bgs to 10 feet bgs, and phenol was detected at $170 \mu g/kg$ in the 1-foot bgs sample from boring 2-16.

Barium, chromium, cobalt, copper, nickel, vanadium, and zinc were detected at concentrations that appear typical of background values. Lead was detected in two borings, 2-16 and 2-11B, at 1 foot bgs to 2 feet bgs, respectively, at 7.0 mg/kg and 23 μg/kg, which is well below the TTLC of 1,000 mg/kg and less than ten times the STLC.

6.3.2 Scrap Storage Yard

The Scrap Storage Yard is used to store miscellaneous equipment and material, including a waste oil pump and roll-off bins that were used to collect and transport waste oil. However, this area did not contain petroleum hydrocarbons at concentrations high enough to be designated as an area of concern.

PCE was detected at boring 2-21 at a concentration of 7.8 μ g/kg and 5.2 μ g/kg in the 1-foot and 4-feet bgs samples, respectively.

Petroleum hydrocarbons, including TRPH (418.1) and motor oil-like hydrocarbons (8015M), were detected at concentrations ranging from 16 mg/kg to 450 mg/kg in 11 of 21 samples at shallow depths of 1 foot to 4 feet bgs.

SVOCs were detected in four of 27 samples at concentrations less than 230 μ g/kg. Certain SVOCs — benz(a)anthracene, chrysene, fluoranthene, phenanthrene, and pyrene — were detected in the 4-foot bgs sample from boring 2BB-2-21 at concentrations ranging from 150 mg/kg to 470 mg/kg. Bis(2-ethylhexyl)-phthalate was detected at concentrations ranging from 110 μ g/kg to 230 μ g/kg in four samples from borings 2BB-2-21, -27, and -30 at depths to 10 feet bgs.

Barium, chromium, cobalt, copper, nickel, vanadium, and zinc were detected at concentrations that appear typical of background values. Lead was reported in boring 2-28 at 8.6 mg/kg and 2.7 mg/kg in the 1-foot and 4-feet bgs samples. These lead

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concentrations are well below the TTLC of 1,000 mg/kg and less than ten times the STLC.

6.3.3 Buildings 54, 55, and 56

Buildings 54, 55 and 56 are used for office space and storage of forklifts, service vehicles, and tools. A transformer substation containing PCBs is located adjacent to

Building 54. Staining around and on the transformer indicated that oil has leaked from

the transformer. However, no PCBs were detected in this area.

No VOCs were detected in this area.

Petroleum hydrocarbons, including TRPH (418.1) and motor oil-like hydrocarbons (8015M), were detected in the samples from boring 2BB-2-1 at concentrations ranging

from 12 mg/kg to 150 mg/kg at depths ranging from 1 foot to 10 feet bgs.

No PCBs were detected in the soil samples collected from this area.

6.3.4 Area Borders with LADWP Electrical Substation

A LADWP electrical substation is located adjacent to the southeastern corner of Area 2.

The electrical substation contains transformers that may contain PCBs. However, no

PCBs were detected in the samples tested for the 2BB investigation of Parcel B of the

BRC C-6 Facility.

No VOCs were detected in this area.

Petroleum hydrocarbons, including TRPH (418.1) and motor oil-like hydrocarbons

(8015M), were detected in seven of 24 samples at concentrations ranging from 11

mg/kg to 360 mg/kg. Six of these detections were at 1 foot or 4 feet bgs, and one

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detection (11 mg/kg) was at 25 feet bgs.

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BOE-C6-0026715

The only SVOC detected in this area was bis(2-ethylhexyl)-phthalate, which was detected at 3,600 μ g/kg and 4,400 μ g/kg in the 15-foot and 25-foot bgs samples collected from boring 2-31, respectively.

No PCBs were detected in this area.

Barium, chromium, cobalt, copper, nickel, vanadium, and zinc were detected at concentrations that appear typical of background values.

6.3.5 Area Border with Montrose Chemical

The Montrose Chemical facility is located adjacent to the eastern boundary of Area 2. Montrose is a known source of contamination to soil and groundwater and is currently on the NPL due to the release of DDT and other chemicals to the environment. However, no DDT or other pesticides were detected in the samples tested for the 2BB investigation of Parcel B of the BRC C-6 Facility.

PCE and TCE were both detected in only one soil sample, 2-34 at a depth of 15 feet bgs and at a concentration of 6.7 μ g/kg and 5.1 μ g/kg, respectively. Chloroform was detected in the 15-foot bgs samples from borings 2-34 and 2-35 at 6.3 μ g/kg and 17 μ g/kg, respectively.

Petroleum hydrocarbons as TRPH (418.1) were detected in four of 18 samples at concentrations ranging from 12 mg/kg to 56 mg/kg. The highest concentration (56 mg/kg) was detected at 1 foot bgs at 2-35, while concentrations of 12 mg/kg and 13 mg/kg were detected in boring 2-35 at 20 feet and 25 feet bgs, respectively.

The only SVOC detected in this area was bis(2-ethylhexyl)-phthalate, which was detected at concentrations ranging from 120 μ g/kg to 680 μ g/kg in borings 2-33 and 2-34 at depths ranging from 1 foot bgs to 20 feet bgs.

No pesticides were detected in this area.

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Barium, chromium, cobalt, copper, nickel, vanadium, and zinc were detected at

concentrations that appear typical of background values.

6.4 **Summary of Findings - Area 6**

Analysis of the results of the Phase II Soil Characterization indicated that there are no

areas of concern in Area 6. Area 6 was divided into two areas of potential concern:

Area Border with Montrose Chemical

Parking Lot

Neither of these two areas of potential concern investigated in Area 6 were found to

contain COPCs at levels such that they were designated areas of concern. The findings

for each of these areas of potential concern are summarized below.

6.4.1 Area Border with International Light Metals

ILM is located adjacent to the western boundary of Area 6. The ILM site is a known

source of soil and groundwater contamination.

TCE was detected in 25 of 40 samples collected from all 6 borings drilled in this area at

concentrations ranging from 5.9 µg/kg to 52 µg/kg. Depending on the boring, it was

detected at depths ranging from 1 to 55 feet bgs.

Petroleum hydrocarbons as TRPH (418.1) were detected in three samples, two from

boring 6-5 and one from boring 6-6, at concentrations ranging from 23 mg/kg to 41

mg/kg and at shallow depths ranging from 1.5 feet to 4.5 feet bgs.

No PCBs were detected in this area.

Barium, chromium, cobalt, copper, nickel, vanadium, and zinc were detected at

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concentrations that appear typical of background values.

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BOE-C6-0026717

6.4.2 Parking Lot

This area comprises most of Area 6 and has historically been primarily a parking lot.

No VOCs were detected in this area.

Petroleum hydrocarbons, including TRPH (418.1) and motor oil-like hydrocarbons (8015M), were detected in 17 of 61 samples at concentrations ranging from 16 mg/kg to 200 mg/kg and at depths ranging from 1 foot and 10 feet bgs.

No PCBs were detected in this area.

Barium, chromium, cobalt, copper, nickel, vanadium, and zinc were detected at concentrations that appear typical of background values.

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7.0 REFERENCE LIST

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Tables

TABLE 1 SOIL SAMPLING ANALYTICAL PROGRAM FOR AREAS 2 AND 6

Boeing Realty Corporation, C-6 Facility Los Angeles, California

8260 or 8260 or 18.1 8015M ⁽¹⁾ Metals Cr (VI) ⁽²⁾ 8270 (PCBs) 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3				# of								
Building Set/Transformer 288-2-1 (1,4,10) 3 3 3 3 3 3 3 3 3	rea	Location	Sample I D	subsurface samples	8260 or 8010/8020	418.1	8015M ⁽¹⁾	Title 22 Metals	Cr (VI) ⁽²⁾	8270	8080 (PCBs)	8080 (Pesticides)
Food Storage Variety Case 2-4 (14.10) 3 3 3 3 3 3 3 3 3	2	Building 54/Transformer		3	3	3	3				3	(2000)
Tool Storage Yard 28B-23 (1,410) 3 3 3 3 3 3 3 3 3	2	Building 54/Transformer		3							6	
Tool Storage Yard 228-24 (14.10) 3 3 3 3 3 3 3 3 3												
Tool Storage Yard ZBB-24 - (14.10) 3 3 3 3 3 3 3 3 3	2	Tool Storage Yard	2BB-2-3 -(1,4,10)	က	3	3	င	ဗ	က	ဗ		
Tool Shorage Yard ZBB-25 - (14,10) 3 3 3 3 3 3 3 3 3	2	Tool Storage Yard		3	က	က	က	3	ဗ	9		
Tool Storage Yard 28B-26 (14.10) 3 3 3 3 3 3 3 3 3	2	Tool Storage Yard	2BB-2-5 -(4,10)	2	2	2	2	2	2	2		
Tool Storage Yard 28B-27 - (14.10) 3 3 3 3 3 3 3 3 3	2	Tool Storage Yard	2BB-2-6 -(1,4,10)	က	က	က	6	9	9	m		
Tool Storage Yard 28B-24 (14,10) 3 <th< td=""><td>2</td><td>Tool Storage Yard</td><td></td><td>8</td><td>က</td><td>က</td><td>9</td><td>9</td><td>3</td><td>က</td><td></td><td></td></th<>	2	Tool Storage Yard		8	က	က	9	9	3	က		
Tool Storage Yard 28B-2-9 (14.10) 3 <t< td=""><td>2</td><td>Tool Storage Yard</td><td>2BB-2-8 -(1,4,10)</td><td>က</td><td>က</td><td>п</td><td>က</td><td>8</td><td>8</td><td>m</td><td></td><td></td></t<>	2	Tool Storage Yard	2BB-2-8 -(1,4,10)	က	က	п	က	8	8	m		
Tool Storage Yard 28B-2-10 - (1,4,10) 3	2	Tool Storage Yard		6	3	က	6	ဗ	9	6		
Tool Storage Yard 2BB-2-1A - (1,410) 3	2	Tool Storage Yard	2BB-2-10 -(1,4,10)	ဗ	က	က	ო	က	8	က		
Tool Storage Yard 2BB-2-11B (2.5,10.20,30.40,60) 7<	2	Tool Storage Yard	2BB-2-11A -(1,4,10)	ဗ	9	က	က	ო	3	m		
Tool Storage Yard 2BB-2-12 - (1,4,10) 3	2	Tool Storage Yard	2BB-2-11B -(2,5,10,20,30,40,50)	7	7	7	7	7	9	7		
Tool Storage Yard 2BB-2-13 - (1,4,10) 3	2	Tool Storage Yard	2BB-2-12 -(1,4,10)	က	က	က	က	ო	8	ო		
Tool Storage Yard 2BB-2-14 - (4.10) 2 3	2	Tool Storage Yard	2BB-2-13 -(1,4,10)	က	က	9	က	e	က	က		
Tool Storage Yard 28B-2-15 - (1,4,10) 3	2	Tool Storage Yard	2BB-2-14 -(4,10)	2	2	2	2	2	7	2		
Tool Storage Yard 2BB-2-16 - (1,4,10) 3	2	Tool Storage Yard	2BB-2-15 -(1,4,10)	က	က	က	6	က	3	က		
Tool Storage Yard 2BB-2-17 - (1,4,10) 3	2	Tool Storage Yard	2BB-2-16 -(1,4,10)	3	က	က	က	8	3	က		
Tool Storage Yard 2BB-2-18 -(1,4,10) 3	2	Tool Storage Yard	2BB-2-17 -(1,4,10)	ဇ	3	က	က	6	3	က		
Scrap Storage Yard 2BB-2-20 -(1,4,10) 3	2	Tool Storage Yard	2BB-2-18 -(1,4,10)	8	3	က	9	က	9	6		
Scrap Storage Yard 2BB-2-20 · (1,4,10) 3												
Scrap Storage Yard 2BB-2-21 - (1,4,10) 3		Scrap Storage Yard	2BB-2-20 -(1,4,10)	9	3	6	3	က	9	60		
Border with Electrical Substation 2BB-2-22 - (1,4,10,15,20,25) 6		Scrap Storage Yard	2BB-2-21 -(1,4,10)	8	က	ო	3	က	9	က		
Border with Electrical Substation 2BB-2-23 - (1,4,10,15,20,25) 6												
Border with Electrical Substation 2BB-2-23 - (1,4,10,15,20,25) 6		Border with Electrical Substation	2BB-2-22 -(1,4,10,15,20,25)	9	9	9	9	9	9	9	9	
Border with Electrical Substation 2BB-2-24 - (1,4,10) 3 <		Border with Electrical Substation	2BB-2-23 -(1,4,10,15,20,25)	9	9	ဖ	9	9	9	9	ဖ	
Scrap Storage Yard 2BB-2-25 - (1,4,10) 3 3 3 3 3 Scrap Storage Yard 2BB-2-26 - (1,4,10) 3 3 3 3 3 Scrap Storage Yard 2BB-2-27 - (1,4,10) 3 3 3 3 3 Scrap Storage Yard 2BB-2-28 - (1,4,10) 3 3 3 3 3 Scrap Storage Yard 2BB-2-29 - (1,4,10) 3 3 3 3		Border with Electrical Substation	2BB-2-24 -(1,4,10)	3	က	က	က	က	8	m	m	
Scrap Storage Yard 2BB-2-25 - (1,4,10) 3												
Scrap Storage Yard 2BB-2-26 - (1,4,10) 3		Scrap Storage Yard	2BB-2-25 -(1,4,10)	3	က	က	3	3	ო	က		
Scrap Storage Yard 2BB-2-27 - (1,4,10) 3		Scrap Storage Yard	2BB-2-26 -(1,4,10)	3	3	က	က	က	က	က		
Scrap Storage Yard 2BB-2-28 - (1,4,10) 3		Scrap Storage Yard	2BB-2-27 -(1,4,10)	င	င	က	က	က	က	က		
Scrap Storage Yard 28B-2-29 -(1,4,10) 3 3 3 3 3 3 3		Scrap Storage Yard	2BB-2-28 -(1,4,10)	3	က	က	က	8	8	က		
		Scrap Storage Yard	2BB-2-29 -(1,4,10)	ဗ	9	m	က	က	6	6		

Notes follow at end of table.

BRC C-6 2BB Study 97400200.007\TABLE1.XLS

SOIL SAMPLING ANALYTICAL PROGRAM FOR AREAS 2 AND 6 TABLE 1

Boeing Realty Corporation, C-6 Facility Los Angeles, California

			# of	8260 or			Title 22			0800	0000
Area	Location	Sample I D	samples	8010/8020	418.1	8015M ⁽¹⁾	Metals	Cr (VI) ⁽²⁾	8270	(PCBs)	(Pesticides)
2	Scrap Storage Yard	2BB-2-30 -(1,4,10)	3	3	3	8	3	3	3		
2	Border with Electrical Substation	2BB-2-31 -(1,4,10,15,20,25)	9	9	ဖ	9	ဖ	9	9	9	
2	Border with Electrical Substation	2BB-2-32 -(1,4,10,15,20,25)	9	9	ဖ	9	9	9	9	9	
2	Border with Montrose Chemical	2BB-2-33 -(1,4,10,15,20,25)	9	9	ဖ	9	ဖ	9	9		9
2	Border with Montrose Chemical	2BB-2-34 -(1,4,10,15,20,25)	9	မ	ဖ	9	ဖ	9	9		9
2	Border with Montrose Chemical	2BB-2-35 -(1,4,10,15,20,25)	9	9	9	9					9
9	Border with ILM	2BB-6-1 -(4,10,20,30,40,50)	9	9	9	9	9	5		ဖ	
မ	Border with ILM	2BB-6-2 -(1,4,10,20,30,40,50)	7	7	^	7	7	7		7	
ဖ	Border with ILM	2BB-6-3 -(1,4,10,20,30,40,50)	7	7	7	7	7	7		7	
9	Border with ILM	2BB-6-4 -(4,10,20,30,40,55)	မ	ဖ	g	9	9	9		9	
9	Border with ILM	2BB-6-5 -(1.5,5,9,19,29,39,49)	2	7	7	7	2	7		7	
မ	Border with ILM	2BB-6-6 -(2,5,10,20,30,40,50)	7	7	7	7	7	7		7	
မ	Parking Lot	2BB-6-8 -(1,4,10,15,20,25)	9	9	9	မ	9	ဖ		9	
9	Parking Lot	2BB-6-9 -(1,4,10,15,20,25)	9	9	9	မ	9	မ		မှ	
9	Parking Lot	2BB-6-10 -(1,4,10,15,20,25)	9	9	9	9	9	ဖ		ဖ	
9	Parking Lot	2BB-6-11 -(1,4,10,15,20,25)	9	9	9	9	9	ဖ		9	
မ	Parking Lot	2BB-6-12 -(1,4,10,15,20,25)	9	9	9	9	9	မ		ဖ	
9	Parking Lot	2BB-6-13 -(1,4,10,15,20,25)	9	9	9	9	မ	မ		ဖ	
ၒ	Parking Lot	2BB-6-14 -(1,4,10,15,21,25)	9	9	9	ဖ	g	ဖ		ဖ	
ဖ	Parking Lot	2BB-6-15 -(1,4,10,15,20,25)	9	ဖ	9	ဖ	9	9		9	
9	Parking Lot	2BB-6-16 -(1,4,10,15,20,25)	9	မ	9	ဖ	9	ဖ		g	
9	Parking Lot	2BB-6-17 -(2,5,10,20,30,40,50)	7	7	7	7	7	4		7	

NOTES:

Blank (empty) cell indicates analysis was not performed for the given sample. (1) 8015M analysis was only performed on sampes with a TRPH detection in 418.1.

(2) ${\rm CR}^{({\rm V})}$ analysis was only performed on samples with >10 mg/kg total Chromium.

Notes follow at end of table.

BRC C-6 2BB Study 97400200.007\TABLE1.XLS

TABLE 2 COMPARISON OF C-6 FACILITY TITLE 22 METALS CONCENTRATIONS IN SOIL SAMPLES WITH COMMON SOIL CONCENTRATIONS AND STATE THRESHOLD LIMIT VALUES

Boeing Realty Corporation, C-6 Facility Los Angeles, California

				Co	ncentrati	on	Common Range	CCR	
Tested				Detecte	d at C-6	Facility	in Soils ^(a)	TTLC ^(b) Value	STLC ^(c) Value
Inorganic	Number of	Number of	Detection		(mg/kg)				
Chemical	Analyses	Detections	Rate	Min.	Max.	Avg.	(ppm)	(mg/kg)	(mg/l)
Antimony	796	0	0.0%	0	0	0	<1 - 2.6 ^(d)	500	15
Arsenic	796	8	1.0%	12	350	110	1 - 50	500	5
Barium	796	796	100%	7	250	100	100 - 3,000	10,000	100
Beryllium	796	0	0.0%	o	0	0	0.1 - 40	75	0 .75
Cadmium	796	4	0.5%	5	9	6	0.01 - 0.7	100	1 .0
Chromium (VI)	796	0	0.0%	0	0	0	Not Available	500	560
Chromium Total	796	796	100%	3	150	25	1 - 1,000	2,500	5
Cobalt	796	796	100%	1	47	7	1 - 40	8,000	80
Copper	796	796	100%	1	81	13	2 - 100	2,500	25
Lead	796	11	1.4%	3	72	24	2 - 200	1,000	5
Mercury	796	o	0.0%	ol	0	0	<0.01 - 4.6 ^(d)	20	0 .2
Molybdenum	796	o	0.0%	o	o	o	<3 - 7 ^(d)	3,500	350
Nickel	796	795	100%	2	140	12	5 - 500	2,000	20
Selenium	796	0	0.0%	0	0	0	0.1 - 2	100	1
Silver	796	o	0.0%	o	0	0	0.01 - 5	500	5
Thallium	796	o	0.0%	0	0	0	2.4 - 31 ^(d)	700	7
Vanadium	796	795	100%	5	66	28	20 - 500	2,400	24
Zinc	796	796	100%	4	120	41	10 - 300	5,000	250

mg/kg = milligrams per kilogram

mg/l = milligrams per liter

ppm = parts per million

- (a) Chemical Equilibria in Soils. Willard L. Lindsay, John L. Wiley & sons, NY, 1979, unless noted otherwise.
- (b) California Code of Regulations (CCR), Title 22, Total Threshold Limit Concentration (TTLC) value. Value set to define a California hazardous waste based on the total concentration.
- (c) CCR, Title 22, Soluble Threshold Limit Concentration (STLC) value. Value set to define a California hazardous waste based on leachate concentration.
- (d) Element Concentrations in Soils and Other Surficial Materials of the Conterminious United States.
- H. T. Shacklette and J. G. Boerngen, USGS Professional Paper 1270, U.S. Government Printing Office, Washington, 1984.

TABLE 3
CHEMICAL ANALYTICAL RESULTS: VOLATILE ORGANIC COMPOUNDS (MOBILE LABORATORY) (EPA Method 8260)
Boeing Realty Corporation, C-6 Facility
Los Angeles, California

Depth (ft	Limit	288-2-1-1	2BB-2-1-4	2BB-2-1-10	2BB-2-3-1	2BB-2-3-4	2BB-2-3-10	288-2-4-1	2BB-2-4-4	2BB-2-4-10	2BB-2-5-4	2BB-2-5-10	2BB-2-6-1	2BB-2-6-4	2BB-2-6-10	2BB-2-7-1	288-2-7-4	2BB-2-7-10	2BB-2-8-1	2BB-2-8-4	288-2-8-10	288-2-9-1	2BB-2-9-4	2BB-2-9-10	2BB-2-10-1	2BB-2-10-4	2BB-2-10-10	2BB-2-11A-1
는 (# 라 enszneß	Ш	-	4	10	1	4	10	1	4	10	4	10	1	4	10	1	4	10	1	4	10	-	4	10	1	4	10	1
Bromodichloromethane	ᇹ																		 									
molomora	1 1																											
ensrltemomor8	ı ı																											
Carbon tetrachloride	5.0																											
Chlorobenzene	0.0																											
Chloroform	5.0 5																											
	5.0 5.0																							Page 1				
Dibromochloromethane	ш																		Sr. i									
eneznedorolrbiC-S,†	5.0																											
sneznedorolichlorobene	5.0																											
4,4-Dichlorobenzene	5.0																											
Dichlorodifluoromethane (Freon 12)	0.0																											
1,2-Dichloroethane (1,2-DCA)	0																											
1,1-Dichloroethene (1,1-DCE)	5.0 5.0																											
cis-1,2-Dichloroethene (c-1,2-DCE)	5.0														, A)													:
rans 1,2-Dichloroethene (t-1,2-DCE)																												
ensqorqorolfoid-S,f	ш																											
eis-1,3-Dichloropropene	0.) 1.														
anadordoromora eti onna	5.0				1					E.																	П	

Shaded cell indicates constutent result was below the detection limit.

BRC C-6 2BB Study 97400200.007\TABLE3.XLS

TABLE 3
CHEMICAL ANALYTICAL RESULTS: VOLATILE ORGANIC COMPOUNDS (MOBILE LABORATORY) (EPA Method 8260)
Boeing Reatty Corporation, C-6 Facility
Los Angeles, California

Trichloroethane (1,1,2-TCA) Ioroethene (TCE) Kylenes ene	tohī	n.c n.c n.c n.c																										
(ADT-f,f,f) ensitieorolifichT-																												
ensrizeovolriasitet2,	ניג'ו ^מ	2																										
ylene chloride (Dichloromethane)	bgs) the Meth			4 (2 •	4	10	1	4	10	4	10		4	10		4	10		7	10	1	4	10	1	4	10	•
	Sample ID		2BB-2-1-1	288-2-1-4 288 2 4 40	200 2 2 4	2BB-2-3-4	2BB-2-3-10	2BB-2-4-1	288-2-4-4	2BB-2-4-10	288-2-5-4	2BB-2-5-10	288-2-6-1	288-2-6-4	2BB-2-6-10	288-2-7-1	2BB-2-7-4	2BB-2-7-10	2BB-2-8-1	2BB-2-8-4	2BB-2-8-10	2BB-2-9-1	2BB-2-9-4	2BB-2-9-10	2BB-2-10-1	2BB-2-10-4	2BB-2-10-10	2BB-2-11A-1
	Area				، اد	2 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

Shaded cell indicates constutent result was below the detection limit.

TABLE 3
CHEMICAL ANALYTICAL RESULTS: VOLATILE ORGANIC COMPOUNDS (MOBILE LABORATORY) (EPA Method 8260)
Boeing Reatty Corporation, C-6 Facility
Los Angeles, California

џулреиzene	3 C	3																										
eneqorqoroldɔiG-ɛ,t-ɛns	4 2	3					1	1	T			1	T						\dagger		\dagger	\dagger			\dagger			1
eneqoroprophoid-£,t-ai	9 6	3					T		T										1	\dagger	T	\dagger	T	t	t	1	T	-
ensqorqoroldəiG-S,	4 6					1	1		Ť				T	T			 			+	T	t	1		+			\dagger
rans 1,2-Dichloroethene (t-1,2-DCE)	1 05																						T	<u> </u>	T	T		T
is-1,2-Dichloroethene (c-1,2-DCE)	3 6																					T						1
.1-Dichloroethene (1,1-DCE)	5.0																										-	T
(AOG-2,t) ensitseorolicid-2,	5.0																											
(AOC-1,f) ensitseoroldoid-1,	3																											
(St noeral ensithemoroufliboroldald	5.0																											
ənəznədoroldəid-A,	5.0																											
eneznedotoldəiG-£,l	5.0																											
eneznedorolhold-2,1	5.0																											
enschemoroidomordiC	JL																											
Chloromethane	<u>.</u>																											
тотогою	Œ																					707						
Сһіогоейлапе	<u> </u>																											
Chlorobenzene	L																											
Sarbon tetrachloride	Щ																											
ensithemomorB	IL																										A.	
motomor8	Ш.																											
Bromodichloromethane																					2 2 2 2							
Benzene	Ш																											
Depth (ft	nit (ug/kg)	4	10	1.5	4.5	9.5	19.5	29.5	39.5	49.5	_	4	10		4	10	4	10	1	4	10	1	4	10	1	4	10	1
Sample ID	Detection Limit (ug/kg)	2BB-2-11A-4	2BB-2-11A-10	2BB-2-11B-1.5	2BB-2-11B-4.5	2BB-2-11B-9.5	2BB-2-11B-19.5	288-2-118-29.5	2BB-2-11B-39.5	288-2-118-49.5	2BB-2-12-1	288-2-12-4	2BB-2-12-10	288-2-13-1	2BB-2-13-4	2BB-2-13-10	288-2-14-4	288-2-14-10	2BB-2-15-1	288-2-15-4	2BB-2-15-10	2BB-2-16-1	2BB-2-16-4	2BB-2-16-10	288-2-17-1	2BB-2-17-4	2BB-2-17-10	2BB-2-18-1
Area		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

TABLE 3
CHEMICAL ANALYTICAL RESULTS: VOLATILE ORGANIC COMPOUNDS (MOBILE LABORATORY) (EPA Method 8260)
Boeing Realty Corporation, C-6 Facility
Los Angeles, California

Area	Sample ID	Depth (ft. bgs)	Methylene chloride (Dichloromethane)	ensrheoroidasreT-S,S,t,l	ensrijeoroldssrieT-S,S,f,l	(ECE)	Toluene	(ADT-f,f,f) enstheoroldohT-f,f,f,	(AOT-2,1,1) enstheroethcree(1,1,2-TCA)	(TCE) (TCE)	(Fr noerlane (Freon 11)	sənəlyX-q,m		o-Xylene	Vinyl chloride	enilossව ss H9T
	Detection Lin	on Limit (ug/kg)	5.0	2.0	Ji	5.0	5.0	5.0	┢			5.0 5.0			5.0	1,000
2 2BE	2BB-2-11A-4	4														
	2BB-2-11A-10	10														
	2BB-2-11B-1.5	1.5														
	2BB-2-11B-4.5	4.5														
	2BB-2-11B-9.5	9.5														
	2BB-2-11B-19.5	19.5														-
	2BB-2-11B-29.5	29.5						5.533								:
	2BB-2-11B-39.5	39.5														
i	2BB-2-11B-49.5	49.5														
	2BB-2-12-1	1														
	2BB-2-12-4	4														
	2BB-2-12-10	10														
2 2BI	2BB-2-13-1	+														
	2BB-2-13-4	4														
2 2B	2BB-2-13-10	10					2.5									
	2BB-2-14-4	4														
	2BB-2-14-10	10														-
	2BB-2-15-1	-														
	2BB-2-15-4	4														
	288-2-15-10	10														
	2BB-2-16-1															
	288-2-16-4	4														
	2BB-2-16-10	10														
	IB-2-17-1															
	2BB-2-17-4	4														
	2BB-2-17-10	10														
	200 2 40 4											1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-			

CHEMICAL ANALYTICAL RESULTS: VOLATILE ORGANIC COMPOUNDS (MOBILE LABORATORY) (EPA Method 8260)

Boeing Realty Corporation, C-6 Facility

Los Angeles, California TABLE 3

Sample D											,														
2BB-21-1-1 1 50 50 50 60	Area	Sample ID	Depth (ft bgs)	Benzene	ensritemoroldaibomorB	molomorB	Brsritemomora	ebholdsster noths					eneznedoroldold-2,1	eneznedotolitald-£,1	eneznedoroldɔid-4,1	(St noer1) ensitsemoroufiborolici	(ADG-1,1) ensitseorolicid-1,1	(A.DDichloroethane (1,2-DCA)	(3-D-F, (1, DCE)	1.2-1.2-Dichloroethene (c-1,2-DCE)	rans 1,2-Dichloroethene (t-1,2-DCE)	9nsqovqovoldoid-S,1	-si-5-Dichloropropene-		ξεμληρουχουο
288-2-18-4 288-2-18-10 288-2-20-1 288-2-20-10 288-2-21-10 288-2-21-10 288-2-2-10 288-2-2-10 288-2-2-15 288-2-2-15 288-2-2-15 288-2-2-15 288-2-2-15 288-2-2-15 288-2-2-15 288-2-2-15 288-2-2-16 288-2-2-16 288-2-2-16 288-2-2-16 288-2-2-16 288-2-2-16 288-2-2-16 288-2-2-16 288-2-2-16 288-2-2-16 288-2-2-16 288-2-2-16 288-2-2-10 288-2-2-10 288-2-2-10 288-2-2-10		Detection Li	imit (ug/kg)	5.0	11	5.0	1	H: I	0.0	0.	5.0	0.	5.	Ш	L		5.0	5.0	5.0	5.0	0	0	0	5.0	5.0
288-2-18-10 288-2-20-4 288-2-20-4 288-2-20-10 288-2-21-4 288-2-21-4 288-2-2-10 288-2-2-10 288-2-2-15 288-2-2-15 288-2-2-15 288-2-2-15 288-2-2-15 288-2-2-15 288-2-2-15 288-2-2-15 288-2-2-16 288-2-2-16 288-2-2-16 288-2-2-16 288-2-2-16 288-2-2-16 288-2-2-10 288-2-2-10 288-2-2-10 288-2-2-10 288-2-2-10 288-2-2-10 288-2-2-10 288-2-2-10 288-2-2-10	2	2BB-2-18-4	4																						
288-2-20-1 288-2-20-4 288-2-20-10 288-2-21-1 288-2-21-10 288-2-2-10	2	288-2-18-10	10																						
288-2-20-4 288-2-20-10 288-2-21-10 288-2-21-10 288-2-22-10 288-2-22-10 288-2-22-10 288-2-22-10 288-2-23-1 288-2-23-1 288-2-23-1 288-2-23-1 288-2-23-1 288-2-23-1 288-2-23-1 288-2-24-1 288-2-24-1 288-2-24-10 288-2-25-1	2	28B-2-20-1	-																					_	
288-2-20-10 288-2-21-1 288-2-21-10 288-2-22-1 288-2-22-10 288-2-22-10 288-2-22-10 288-2-22-10 288-2-23-10 288-2-23-10 288-2-23-10 288-2-23-10 288-2-23-10 288-2-23-10 288-2-23-10 288-2-24-10 288-2-24-10 288-2-25-10 288-2-25-10 288-2-25-10 288-2-25-10 288-2-25-10	2	2BB-2-20-4	4							138631												-			
288-2-21-1 288-2-21-4 288-2-22-1 288-2-22-10 288-2-22-10 288-2-22-10 288-2-22-10 288-2-23-1 288-2-23-1 288-2-23-1 288-2-23-1 288-2-23-1 288-2-23-1 288-2-24-1 288-2-24-1 288-2-25-1 288-2-25-1	2	288-2-20-10	10																						
288-2-21-4 288-2-22-4 288-2-22-10 288-2-22-10 288-2-22-15 288-2-22-25 288-2-23-1 288-2-23-1 288-2-23-1 288-2-23-1 288-2-23-1 288-2-23-1 288-2-24-1 288-2-24-1 288-2-25-1 288-2-25-1 288-2-25-1	2	2BB-2-21-1	-																						
28B-2-21-10 28B-2-22-1 28B-2-22-10 28B-2-22-15 28B-2-22-25 28B-2-23-1 28B-2-23-1 28B-2-23-1 28B-2-23-1 28B-2-23-1 28B-2-23-1 28B-2-23-1 28B-2-24-1 28B-2-24-1 28B-2-25-1 28B-2-25-1 28B-2-25-1	2	288-2-21-4	4																					_	
288-2-22-1 288-2-22-4 288-2-22-15 288-2-22-15 288-2-22-25 288-2-23-1 288-2-23-15 288-2-23-15 288-2-23-15 288-2-23-15 288-2-23-15 288-2-23-15 288-2-23-15 288-2-23-15 288-2-23-15 288-2-23-15 288-2-23-15 288-2-23-10 288-2-25-1	2	2BB-2-21-10	10																			_		-	
288-2-22-4 288-2-22-15 288-2-22-25 288-2-22-25 288-2-23-3-4 288-2-23-10 288-2-23-15 288-2-23-15 288-2-23-15 288-2-24-1 288-2-24-1 288-2-25-1 288-2-25-1	2	2BB-2-22-1	-																					_	
28B-2-22-10 28B-2-22-15 28B-2-22-25 28B-2-23-1 28B-2-23-10 28B-2-23-15 28B-2-23-15 28B-2-23-15 28B-2-24-1 28B-2-24-1 28B-2-24-1 28B-2-25-1 28B-2-25-1 28B-2-25-1	2	28B-2-22-4	4																					_	
288-2-22-15 288-2-22-25 288-2-23-1 288-2-23-1 288-2-23-15 288-2-23-15 288-2-23-15 288-2-24-1 288-2-24-1 288-2-24-1 288-2-25-1 288-2-25-1	2	2BB-2-22-10	£																	-					
288-2-22-25 288-2-23-1 288-2-23-1 288-2-23-1 288-2-23-15 288-2-23-25 288-2-24-1 288-2-24-1 288-2-24-1 288-2-25-1 288-2-25-1	2	2BB-2-22-15	15																						
288-2-2-5 288-2-23-1 288-2-23-10 288-2-23-10 288-2-23-25 288-2-24-1 288-2-24-1 288-2-24-1 288-2-24-1 288-2-25-1 288-2-25-1 288-2-25-1	2	2BB-2-22-20	20																					<u> </u>	
288-2-23-1 288-2-23-10 288-2-23-10 288-2-23-25 288-2-24-1 288-2-24-1 288-2-24-10 288-2-24-10 288-2-25-1 288-2-25-1	2	2BB-2-22-25	25																				7.5		
288-2-23-4 288-2-23-15 288-2-23-15 288-2-23-25 288-2-24-1 288-2-24-10 288-2-25-1 288-2-25-1 288-2-25-1	2	2BB-2-23-1	1																						
288-2-23-10 288-2-23-15 288-2-23-25 288-2-24-1 288-2-24-10 288-2-24-10 288-2-25-1 288-2-25-1 288-2-25-1 288-2-25-1	2	2BB-2-23-4	4																						
288-2-23-15 288-2-23-25 288-2-24-1 288-2-24-1 288-2-24-10 288-2-25-1 288-2-25-1 288-2-25-1	2	2BB-2-23-10	10																						
288-2-23-20 288-2-23-25 288-2-24-1 288-2-24-10 288-2-25-1 288-2-25-1 288-2-25-1	2	2BB-2-23-15	15																-			:			
288-2-23-25 288-2-24-1 288-2-24-10 288-2-25-1 288-2-25-1 288-2-25-1 288-2-25-1	2	2BB-2-23-20	20																					-	
288-2-24-1 288-2-24-4 288-2-24-10 288-2-25-1 288-2-25-4 288-2-25-10	2	2BB-2-23-25	25																					-	
288-2-24-10 288-2-25-1 288-2-25-1 288-2-25-1 288-2-25-10	2	2BB-2-24-1	1																			:		_	
288-2-24-10 288-2-25-1 288-2-25-4 288-2-25-10	2	2BB-2-24-4	4																					_	
288-2-25-1 288-2-25-4 288-2-25-10	2	2BB-2-24-10	10																			_	-	_	
28B-2-25-10	2	2BB-2-25-1	-																				_	_	
288-2-25-10	2	2BB-2-25-4	4																				_	\vdash	
	2	288-2-25-10	10																						
2BB-2-26-1	2	288-2-26-1	+																	-		·			

BRC C-6 2BB Study 97400200.007\TABLE3.XLS

BOE-C6-0026729

Shaded cell indicates constutent result was below the detection limit.

TABLE 3
CHEMICAL ANALYTICAL RESULTS: VOLATILE ORGANIC COMPOUNDS (MOBILE LABORATORY) (EPA Method 8260)
Boeing Realty Corporation, C-6 Facility

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TABLE 3

CHEMICAL ANALYTICAL RESULTS: VOLATILE ORGANIC COMPOUNDS (MOBILE LABORATORY) (EPA Method 8260)

Boeing Realty Corporation, C-6 Facility

Los Angeles, California

Ξεμλιреиzeue	5.0																											
sans-1,3-Dichloropropene	3																											
eneqoroprohid:0-6,1-8i		L																									T	Ī
9nsqorqoroldoic.2,f	JL																				T							
trans 1,2-Dichloroethene (t-1,2-DCE)	H	L																								T	 	T
(S-Dichloroethene (c-1,2-DCE)	5.0																							Ī		1	T	
1,1-Dichloroethene (1,1-DCE)	5.0																											
(A.D.C.) (A.SDCA)	5.0																											F
(ADC-1,t) ensthane (1,1-DCA)	5.0																											
Oichlorodifluoromethane (Freon 12)	5.0																											
eneznedoroldɔid-4,t	5.0																											
f.3-Dichlorobenzene	5.0																											
1,2-Dichlorobenzene	5.0																											
Dibromochloromethane	5.0																											
Chloromethane	5.0																						1000					
rmotorold	5.0																20,00000											
ensdreorold	5.0																											
ensznedorold	5.0																											
Carbon tetrachloride	5.0																											
enschamomora	5.0																											
ппојотог	5.0																											
	5.0																											
	5.0				100												100											
Depth (ff bgs)	nit (ug/kg)	4	10	1	4	10	1	4	10	1	4	10	1	4	10	+	4	10	15	20	25	1	4	10	15	20	25	T
Sample ID	Detection Limit (ug/kg)	2BB-2-26-4	2BB-2-26-10	28B-2-27-1	288-2-27-4	2BB-2-27-10	2BB-2-28-1	288-2-28-4	2BB-2-28-10	288-2-29-1	2BB-2-29-4	2BB-2-29-10	288-2-30-1	2BB-2-30-4	2BB-2-30-10	2BB-2-31-1	28B-2-31-4	2BB-2-31-10	2BB-2-31-15	288-2-31-20	2BB-2-31-25	2BB-2-32-1	2BB-2-32-4	2BB-2-32-10	2BB-2-32-15	2BB-2-32-20	2BB-2-32-25	2BB-2-33-1
Area		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

TABLE 3

CHEMICAL ANALYTICAL RESULTS: VOLATILE ORGANIC COMPOUNDS (MOBILE LABORATORY) (EPA Method 8260)

Boeing Realty Corporation, C-6 Facility
Los Angeles, California

enilose5 ss HqT	1,000																											
Vinyl chloride	5.0																											$\frac{1}{1}$
о-хујеле	5.0																											
sənəlyX-q,m	5.0																											
(ff noer4) ensthemoroufforoldrin	5.0																											_
Trichloroethene (TCE)	5.0																											
(AOT-S,t,t) ensdteoroldohT-S,t,t	5.0																											
(AOT-f,f,f) ensitseoiolidairT-f,f,f	5.0				7										***													
eneuloT	5.0														1 1													
(339) enertheoroidasstel	5.0																											
ensriteorolriostteT-2,2,1,1	5.0																											
enstheoroldsstreT-2,2,1,1	5.0																											
Methylene chloride (Dichloromethane)	5.0																											
Depth (ft.	Limit (ug/kg)	4	10	_	4	10	1	4	10	1	4	10	1	4	10	1	4	10	15	20	25	1	4	10	15	20	25	_
Sample ID	Detection Lin	2BB-2-26-4	2BB-2-26-10	288-2-27-1	288-2-27-4	2BB-2-27-10	2BB-2-28-1	288-2-28-4	2BB-2-28-10	2BB-2-29-1	2BB-2-29-4	2BB-2-29-10	2BB-2-30-1	2BB-2-30-4	28B-2-30-10	2BB-2-31-1	288-2-31-4	2BB-2-31-10	2BB-2-31-15	2BB-2-31-20	2BB-2-31-25	2BB-2-32-1	2BB-2-32-4	2BB-2-32-10	2BB-2-32-15	2BB-2-32-20	288-2-32-25	2BB-2-33-1
Area		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

BOE-C6-0026731

TABLE 3

CHEMICAL ANALYTICAL RESULTS: VOLATILE ORGANIC COMPOUNDS (MOBILE LABORATORY) (EPA Method 8260)

Boeing Reatty Corporation, C-6 Facility

Los Angeles, California

euezueql,kų	5.0					Γ																						
eneqorqoroldoiG-£,1-anst	5.0							ļ							-									-			-	H
eneqoropichlichloropene	5.0										l					-												П
,2-Dichloropropane	5.0	ļ: 																-									<u> </u>	П
rans 1,2-Dichloroethene (t-1,2-DCE)	5.0																											
(3.2-1,2-Dichloroethene (c-1,2-DCE)	5.0																											·
(3D-1,1) enethene (1,1-DCE)	5.0																											
(1,2-Dichloroethane (1,2-DCA)	5.0																											
(ACA-1,1) ensits et l'acA)	5.0																											П
(St noer=) ensitsemorouffiboroldold	5.0																											
eneznedoroldoid-4,1	5.0																											
9-Dichlorobenzene	5.0																											
eneznedoroldoid-2, f	11 1																											
Dibromochloromethane	5.0																											
Chloromethane	5.0																											
Chloroform	5.0									6.3						17												
Chloroethane	5.0																											
Chlorobenzene	5.0																											
Sarbon tetrachloride	5.0																											
Bromomethane																												
тојотоя	5.0																											
Bromodichloromethane	l I																											
enezne8	$oxed{L}$																											
Depth (f.	mit (ug/kg)	4	10	15	20	25	1	4	10	15	20	25	1	4	10	15	20	25	10	20	30	4	40	50	1	4	10	20
Sample ID	Detection Limit (ug/kg)	288-2-33-4	2BB-2-33-10	2BB-2-33-15	2BB-2-33-20	2BB-2-33-25	2BB-2-34-1	2BB-2-34-4	2BB-2-34-10	2BB-2-34-15	2BB-2-34-20	2BB-2-34-25	2BB-2-35-1	2BB-2-35-4	2BB-2-35-10	2BB-2-35-15	2BB-2-35-20	288-2-35-25	2BB-6-1-10	2BB-6-1-20	2BB-6-1-30	2BB-6-1-4	2BB-6-1-40	2BB-6-1-50	2BB-6-2-1	2BB-6-2-4	2BB-6-2-10	2BB-6-2-20
Area		2	2	7	2	2	2	2	2	2	2	2	2	2	2	2	2	2	9	9	9	9	9	ဖ	9	9	9	9

TABLE 3
CHEMICAL ANALYTICAL RESULTS: VOLATILE ORGANIC COMPOUNDS (MOBILE LABORATORY) (EPA Method 8260)
Boeing Realty Corporation, C-6 Facility
Los Angeles, California

PH as Gasoline	000				Ī	Τ	ľ	Γ	Γ							ľ					Τ	Γ	Ī	Ī				Γ
	L] : : : :																										
Ninyl chloride	5.0																											-
enel X-o	5.0																											
senekX-q.m	5.0																											
(11 noer== (Freon 11)	5.0																											
(30T) enetheorolioh	5.0									5.1													15	52		9.6		9.1
(AOT-2,t,t) ensitteorolitohT-2,t,f	5.0																											
(ACT-1,1,1,1-Trichloroethane (1,1,1,1-TCA)	5.0		300																									
eneuloT	5.0																											
(PCE)	Ш									6.7																		
enstheoroldssteT-2,2,1,1	5.0																											
ensrtieoroldɔsrteT-2,2,1,1																												
Methylene chloride (Dichloromethane)																												.:
Depth (ft bgs)	Limit (ug/kg)	4	10	15	20	25	-	4	10	15	20	25	1	4	10	15	20	25	10	20	30	4	40	50	1	4	10	20
Sample ID	Detection Li	2BB-2-33-4	2BB-2-33-10	2BB-2-33-15	2BB-2-33-20	2BB-2-33-25	2BB-2-34-1	2BB-2-34-4	2BB-2-34-10	2BB-2-34-15	2BB-2-34-20	2BB-2-34-25	2BB-2-35-1	2BB-2-35-4	2BB-2-35-10	2BB-2-35-15	2BB-2-35-20	2BB-2-35-25	2BB-6-1-10	2BB-6-1-20	2BB-6-1-30	2BB-6-1-4	2BB-6-1-40	2BB-6-1-50	2BB-6-2-1	2BB-6-2-4	2BB-6-2-10	2BB-6-2-20
Area		2	2	2			2	2	2	2	2		2		2	2	2	2	9	9	9	9	9	9	9	9		9

BRC C-6 2BB Study 97400200.007\TABLE3.XLS

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TABLE 3

CHEMICAL ANALYTICAL RESULTS: VOLATILE ORGANIC COMPOUNDS (MOBILE LABORATORY) (EPA Method 8260)

Boeing Reatty Corporation, C-6 Facility

Los Angeles, California

euszene £tyλ peuzene																												
	5.0																										T	T
is-1,3-Dichloropropene	5.0																		T		T	T	T	T			T	T
ensqorqorolhoid-2,1	5.0											Ī			T				T	1		T					T	
trans 1,2-Dichloroethene (t-1,2-DCE)	50																					T		T	l			厂
Carloroethene (c-1,2-DCE)	5.0																					T					Ī	
1,1-Dichloroethene (1,1-DCE)	5.0																											
1,2-Dichloroethane (1,2-DCA)																												
(A)-Dichloroethane (1,1-DCA)																												
Ochlorodifluoromethane (Freon 12)																												
4-Dichlorobenzene	5.0																											
3-Dichlorobenzene	5.0																											
aneznedorolchick, ľ	5.0																											
Dibromochloromethane	5.0																											
Chloromethane	5.0																											
Chloroform	5.0																											
Chloroethane	5.0																											
Shiorobenzene	5.0																											
Sarbon tetrachloride	5.0																											
Bromomethane	5.0																											
mrotomorB	5.0																											
Bromodichloromethane	5.0																											
Benzene	5.0																	-										\exists
Depth (ft bgs)	it (ug/kg)	30	40	20	1	4	10	20	30	40	20	4	10	20	30	4	25	2	4.5	9.5	19.5	29.5	39.5	49.5	1.5	4.5	9.5	19.5
Sample ID	Detection Limit (ug/kg)	2BB-6-2-30	288-6-2-40	2BB-6-2-50	288-6-3-1	2BB-6-3-4	2BB-6-3-10	2BB-6-3-20	2BB-6-3-30	2BB-6-3-40	2BB-6-3-50	2BB-6-4-4	2BB-6-4-10	2BB-6-4-20	2BB-6-4-30	2BB-6-4-40	2BB-6-4-55	2BB-6-5-2	2BB-6-5-4.5	2BB-6-5-9.5	2BB-6-5-19.5	2BB-6-5-29.5	2BB-6-5-39.5	2BB-6-5-49.5	2BB-6-6-1.5	2BB-6-6-4.5	2BB-6-6-9.5	2BB-6-6-19.5
Area		9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

Shaded cell indicates constutent result was below the detection limit.

TABLE 3

CHEMICAL ANALYTICAL RESULTS: VOLATILE ORGANIC COMPOUNDS (MOBILE LABORATORY) (EPA Method 8260)

Boeing Reatty Corporation, C-6 Facility

Los Angeles, California

										_					_
Area	Sample ID	Depth (ft bgs)	Methylene chloride (Dichloromethane)	ensrijeoroldssijeT-2,2,1,1	ensriteoroldsstat-2,2,1,1	Tetrachloroethene (PCE)	oluene T	(ADT-1,1,1,1) enscheorolichiT-1,1,1,1	(AOT-S,f,f) ensitieorolicit. (A,f,c,fCA)	Tichloroethene (TCE)	(ht noeria) ensthemoroufiorolitch	sənəlyX-q,rr	enel X-c	Vinyl chloride	eniloss9 ss Hq1
	ᄩ	Limit (ug/kg)	5.0	Ш	5.0		5.0	5.0	5.0		5.0		5.0	9.0	Į.
9	2BB-6-2-30	30													
9	2BB-6-2-40	40								16					
9	2BB-6-2-50	90								19					
9	2BB-6-3-1	1								23					
9	2BB-6-3-4	4													
9	2BB-6-3-10	10								13					
9	2BB-6-3-20	20								5.9					
g	2BB-6-3-30	30													
g	2BB-6-3-40	40								8					
9	2BB-6-3-50	90	-1-2							6.2					
9	2BB-6-4-4	4								11					
9	2BB-6-4-10	10								33					
9	2BB-6-4-20	20								16					
9	2BB-6-4-30	30								34					
9	2BB-6-4-40	40								15					
9	2BB-6-4-55	55								13					
9	28B-6-5-2	2								8.4					
9	2BB-6-5-4.5	4.5								7.4					
9	2BB-6-5-9.5	9.5								7.7					
9	2BB-6-5-19.5	19.5	- 1							16					
9	2BB-6-5-29.5	29.5								17					
9	2BB-6-5-39.5	39.5								33					
9	2BB-6-5-49.5	49.5								28					
9	2BB-6-6-1.5	1.5													
9	2BB-6-6-4.5	4.5													
9	2BB-6-6-9.5	9.5													
9	2BB-6-6-19.5	19.5												F	

BRC C-6 2BB Study 97400200.007\TABLE3.XLS

TABLE 3
CHEMICAL ANALYTICAL RESULTS: VOLATILE ORGANIC COMPOUNDS (MOBILE LABORATORY) (EPA Method 8260)
Boeing Realty Corporation, C-6 Facility
Los Angeles, California

		Г	Γ		- · ·	Γ	Ė			T .	Γ	Γ	Γ	<u> </u>			Г				Γ		Г		Γ			
Еґһуірепzепе	5.0																											
sna-c,1,2-Dichloropropene	5.0										\vdash				-				-	<u> </u>		-		H			_	
	0	-				-	-		H							: ::::::::::::::::::::::::::::::::::::												
eneqoroprophical-ε, h-sic	0.				_				_	:																		
1.2-Dichloropropane	5.0					_		L									: ::.			ļ	_		<u> </u>					
trans 1,2-Dichloroethene (t-1,2-DCE)	0						L	_	_														L					
Cis-1,2-Dichloroethene (c-1,2-DCE)	11								L																	: :		
(3)G-1,t) enetheoroldbiC-1,t	5.0																		i i						7. Ş			
(YOG-7'1) augungo louigig-7'1	5.0															2 S												
(A)C-S.(h) ansrtheorolic (A)C-DCA)	0							H																80 / H 2- / H 3- / H				
(A)d-l',f) ensitheoroethane	5.0																											
Dichlorodifluoromethane (Freon 12)																												
1,4-Dichlorobenzene																												
1,3-Dichlorobenzene	1																											
enaznedorolhold-2, h	5.0																											
ensthamoroldicomordic	5.0																											
Chloromethane	5.0		10,000							300000 300000 4000000000000000000000000					H													
Сһіогогот	5.0														200													
	0.0																											
Chloroethane	5.0																		2									
Chlorobenzene	5.0																											
Sarbon tetrachloride	0 5								1 1																			
ensthemomor8	5																											
тототопоз																												
Bromodichloromethane	5.0																											
enszneß	5.0													1														•
Depth (ft.	/kg)	29.5	39.5	50.5	-	4	10	15	20	25	1	4	10	15	20	25	1	4	10	15	20	25	1	4	10	15	20	25
Depth (mit (ug	L	L		L		L																	Щ				
Q	Detection Limit (ug/kg)																								0	5	0	25
Sample ID	Detect	-6-29.5	-6-39.5	-6-50.5	6 -1	4	8-10	-8-15	-8-20	-8-25	9-1	9-4	9-10	-9-15	-9-20	-9-25	.10-1	10-4	.10-10	-10-15	10-20	10-25	.11A-1	·11A-4	11A-1	11B-1	118-2	.11B-2
ဖိ 		2BB-6-6-29.5	2BB-6-6-39.5	2BB-6-6-50.5	2BB-6-8-1	2BB-6-8-4	2BB-6-8-10	2BB-6-8-15	2BB-6-8-20	2BB-6-8-25	2BB-6-9-1	2BB-6-9-4	2BB-6-9-10	2BB-6-9-15	2BB-6-9-20	2BB-6-9-25	2BB-6-10-1	2BB-6-10-4	2BB-6-10-10	2BB-6-10-15	2BB-6-10-20	2BB-6-10-25	2BB-6-11A-1	2BB-6-11A-4	2BB-6-11A-10	2BB-6-11B-15	288-6-118-20	2BB-6-11B-25
					Ť		Ť	,										•		i T	Ï	Ť						
Area		9	9	9	9	ဖ	ဖ	9	9	9	9	9	မ	9	9	9	9	9	9	9	g	9	9	9	9	9	9	9
													1									1						

TABLE 3
CHEMICAL ANALYTICAL RESULTS: VOLATILE ORGANIC COMPOUNDS (MOBILE LABORATORY) (EPA Method 8260)
Boeing Realty Corporation, C-6 Facility
Los Angeles, California

PH as Gasoline	, 00,																							•				
Vinyl chloride	5.0																			:							T	T
euej/X-c	5.0																											
sənəlyX-q.m	5.0																											Ī
(ft noer=) ensitsemoronflorolith	5.0																										T	t
Thchloroethene (TCE)	5.0		6.0																									
(AOT-S,t,t) enstheoroldohT-S,t,t	5.0																											Ĭ
(ADT-1,1,1,1) ensitseorolicit-1,1,1	5.0																											I
eneuloT	5.0																											
(PCE)	5.0							343																				I
ensriteoroldastteT-2,2,1,1	Ш																											l
۱٫۲,۲,۲-۲etrachloroethane	L																											
Methylene chloride (Dichloromethane)	5.0																											
Depth (ft bgs)	mit (ug/kg)	29.5	39.5	50.5	1	4	10	15	20	25	1	4	10	15	20	25	1	4	10	15	20	25	1	4	10	15	20	
Sample ID	Detection Limit (ug/kg)	2BB-6-6-29.5	2BB-6-6-39.5	2BB-6-6-50.5	2BB-6-8-1	2BB-6-8-4	2BB-6-8-10	288-6-8-15	2BB-6-8-20	2BB-6-8-25	2BB-6-9-1	2BB-6-9-4	288-6-9-10	2BB-6-9-15	2BB-6-9-20	2BB-6-9-25	288-6-10-1	2BB-6-10-4	2BB-6-10-10	2BB-6-10-15	2BB-6-10-20	2BB-6-10-25	2BB-6-11A-1	2BB-6-11A-4	2BB-6-11A-10	2BB-6-11B-15	2BB-6-11B-20	1 1 1 1 1 1 1
Area		9	9	9	9		9	9	9	6	9					9	9		9	9	9	9	9	9	9	9	9	

TABLE 3

CHEMICAL ANALYTICAL RESULTS: VOLATILE ORGANIC COMPOUNDS (MOBILE LABORATORY) (EPA Method 8260)

Boeing Realty Corporation, C-6 Facility

Los Angeles, California

£thylbenzene	5.0																											
eneqorqoroldoiG-6,1-ansı	205		-											\dagger	\vdash					T			+		-		-	
eneqoropichloid-£,f-si:	900								T			1 1									1		T		T			\vdash
ensqorqoroldəid-2,	5.0				ľ		T	T					l							T	T		<u> </u>		1			T
rans 1,2-Dichloroethene (t-1,2-DCE)	5.0																				Ī		T		T	T		H
:s-1,2-Dichloroethene (c-1,2-DCE)	5.0																								Ī		Γ	T
(1-Dichloroethene (1,1-DCE)	5.0																											
(A.2-DCA)	5.0																											
(ADG-1,1) ensitseorolitaid-1,1	5.0				I																							
Or noer=) ensthemorouffiboroldoid	5.0																											
4-Dichlorobenzene	5.0																											
9-3-Dichlorobenzene	5.0																											
1,2-Dichlorobenzene	5.0																											
Dipromordiomethane	5.0																											
Chloromethane	5.0	and the second									Pr. 11																	
Chloroform	9.0	201130 20																										
Chloroethane																												
Chlorobenzene	ட																											
Sarbon tetrachloride	5.0																											
Bromomethane																												
тютопопа																												
Bromodichloromethane	L																											
enszne8	5.0																											
Depth (ft bgs)	nit (ug/kg)	1	4	10	15	20	25	1	4	10	15	20	25	1	4	10	15	21	25	1	4	10	15	20	25	1	4	10
Sample ID	Detection Limit (ug/kg)	2BB-6-12-1	2BB-6-12-4	2BB-6-12-10	2BB-6-12-15	2BB-6-12-20	2BB-6-12-25	2BB-6-13-1	288-6-13-4	2BB-6-13-10	2BB-6-13-15	2BB-6-13-20	2BB-6-13-25	2BB-6-14-1	2BB-6-14-4	2BB-6-14-10	2BB-6-14-15	2BB-6-14-21	2BB-6-14-25	2BB-6-15-1	28B-6-15-4	2BB-6-15-10	2BB-6-15-15	2BB-6-15-20	28B-6-15-25	2BB-6-16-1	2BB-6-16-4	2BB-6-16-10
Area		9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	6	9	9	9

Shaded cell indicates constutent result was below the detection limit.

BRC C-6 2BB Study 97400200.007\TABLE3.XLS

CHEMICAL ANALYTICAL RESULTS: VOLATILE ORGANIC COMPOUNDS (MOBILE LABORATORY) (EPA Method 8260)

Boeing Realty Corporation, C-6 Facility

Los Angeles, California TABLE 3

(TChloroethene (TCE)	╫																										
(ADT-S,t,t) enstheoroidchT-S,t,f	0 2.0																										
eneuloT	_						250																				
Tetrachloroethene (PCE)																											
ensriteorointossueT-2,2,1,1,1	5.0 5.0										333															13.00	
	.0 5.0																										
ensrheoroliossteT-2,2,1,1	5.0 5.0	1	7	10	15	20	25	4	10	15	20	25	1	4. T.	10	15	21	25	-	4	10	15	20	25	•	7	10
(ensrtremorolhicle (Dichloromethane)	.0 5.0	2BB-6-12-1		2BB-6-12-10 10		2BB-6-12-20 20 20	5		2BB-6-13-10 10			5	2BB-6-14-1			2BB-6-14-15 15		5			2BB-6-15-10 10	2BB-6-15-15 15	2BB-6-15-20 20	2BB-6-15-25 25			2BB-6-16-10 10

Shaded cell indicates constutent result was below the detection limit.

BRC C-6 2BB Study 97400200.007\TABLE3.XLS

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TABLE 3

CHEMICAL ANALYTICAL RESULTS: VOLATILE ORGANIC COMPOUNDS (MOBILE LABORATORY) (EPA Method 8260)

Boeing Realty Corporation, C-6 Facility

Los Angeles, California

	Т	1	Т	Т	Т	Т	Т	Т	_	т-	Т
грАіреихеие	200		ļ								
eneqorqorold:0-6,1-ansr	203						T			-	
eneqorqoroldɔiG-£,h-zi	200									Γ	
ensqorqoroldɔiG-2,	5.0										
rans 1,2-Di ^c hloroethene (t-1,2-DCE)	5.0										
sis-1,2-Dichloroethene (c-1,2-DCE)	5.0										
(1-Dichloroethene (1,1-DCE)	5.0										
(ACC-S.t) ensitseorolicid-S.	5.0										
(ADC-1,1) ensthane (1,1-DCA)	5.0										
(Sr noer7) ensthemoroufiboroidal	5.0										
ا,4-Dichlorobenzene	5.0										
-3-Dichlorobenzene	5.0										
eneznedoroldɔiC-2,1	5.0										
ens:hemoroldomordio	5.0						**************************************				
Chloromethane	5.0				30000						
motoroldO	5.0										
Chloroethane	5.0										
Chlorobenzene	5.0										
ebitolidastes nodas	5.0										
Bromomethane											
тогото	5.0										
Bromodichloromethane	5.0										
Benzene	5.0		*								
Depth (ft bgs)	it (ug/kg)	15	20	25	1.5	4.5	9.5	19.5	29.5	39.5	49.5
Sample ID	Detection Limit (ug/kg)	2BB-6-16-15	2BB-6-16-20	2BB-6-16-25	2BB-6-17-1.5	2BB-6-17-4.5	2BB-6-17-9.5	2BB-6-17-19.5	2BB-6-17-29.5	2BB-6-17-39.5	2BB-6-17-49.5
		2Bt	2BE	2Bt	2BE	2BE	2B£	2BE	2BE	2BE	2B£
Area		9	9	9	မ	9	9	9	9	9	မ
	Ш	Ш									

Shaded cell indicates constituent result

was below the detection limit

TABLE 3
CHEMICAL ANALYTICAL RESULTS: VOLATILE ORGANIC COMPOUNDS (MOBILE LABORATORY) (EPA Method 8260)
Boeing Reaty Corporation, C-6 Facility
Los Angeles, California

							1		
									ľ
					H	1.		I	ļ.
-									
15	20	25	1.5	4.5	9.5	19.5	29.5	39.5	49.5
2BB-6-16-15	2BB-6-16-20	288-6-16-25	2BB-6-17-1.5	2BB-6-17-4.5	2BB-6-17-9.5	2BB-6-17-19.5	2BB-6-17-29.5	2BB-6-17-39.5	2BB-6-17-49.5
	15	20	15 20 25	20 22 25 1.5	20 22 25 1.5 4.5	20 20 1.5 4.5	20 20 25 4.5 9.5 6 19.5	20 20 1.5 4.5 5 19.5 6 29.5	20 20 25 4.5 6 9.5 5 29.5 5 39.5

Shaded cell indicates constituent result

was below the detection limit

BRC C-6 2BB Study 97400200.007\TABLE3.XLS

Shaded cell indicates constutent result was below the detection limit.

TABLE 4 CHEMICAL ANALYTICAL RESULTS: TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (MOBILE LABORATORY) (EPA Methods 418.1/8015M)

Boeing Realty Corporation, C-6 Facility Los Angeles, California

Area	Sample ID	Depth (ft bgs)	TRPH (EPA 418.1)	TPH-E Diesel (EPA 8015M)	TPH-E Motor Oil (EPA 8015M)
	Detection Li	mit (mg/kg)	10	10	10
2	2BB-2-1-1	1	61		
2	2BB-2-1-4	4	97		12
2	2BB-2-1-10	10	150		
2	2BB-2-3-1	1	12		
2	2BB-2-3-4	4	210		26
2	2BB-2-3-10	10			
2	2BB-2-4-1	1	15		
2	2BB-2-4-4	4	12		
2	2BB-2-4-10	10	36		
2	2BB-2-5-4	4			
2	2BB-2-5-10	10			
2	2BB-2-6-1	1			
2	2BB-2-6-4	4	37		
2	2BB-2-6-10	10			
2	2BB-2-7-1	1			
2	2BB-2-7-4	4			
2	2BB-2-7-10	10		-	
2	2BB-2-8-1	1			
2	2BB-2-8-4	4			
2	2BB-2-8-10	10			
2	2BB-2-9-1	1		-	
2	2BB-2-9-4	4	29		
2	2BB-2-9-10	10	32		
2	2BB-2-10-1	1			ality del
2	2BB-2-10-4	4			
2	2BB-2-10-10	10			
2	2BB-2-11A-1	1			
2	2BB-2-11B-1.5	1.5	3200		710 *
2	2BB-2-11A-4	4			
2 2	2BB-2-11B-4.5	4.5			
2 2	2BB-2-11A-10	10			
2 2	2BB-2-11B-19.5	19.5			
2 2	2BB-2-11B-29.5	29.5			
2 2	2BB-2-11B-39.5	39.5			

Notes follow at end of table.

BRC C-6 2BB Study 97400200.007\TABLE4.XLS

Parcel B 10/30/97 Page 1 of 7

Boeing Realty Corporation, C-6 Facility Los Angeles, California

	T				
Area	Sample ID	Depth (ft bgs)	TRPH (EPA 418.1)	TPH-E Diesel (EPA 8015M)	TPH-E Motor Oil (EPA 8015M)
	Detection Li	mit (mg/kg)	10	10	10
2	2BB-2-11B-49.5	49.5			
2	2BB-2-11B-9.5	9.5			
2	2BB-2-12-1	1	38		
2	2BB-2-12-4	4	67		
2	2BB-2-12-10	10	15		
2	2BB-2-13-1	1	15		
2	2BB-2-13-4	4	37		11
2	2BB-2-13-10	10	31		
2	2BB-2-14-4	4	45		
2	2BB-2-14-10	10	35		
2	2BB-2-15-1	1	18		
2	2BB-2-15-4	4	6000		420 *
2	2BB-2-15-10	10			
2	2BB-2-16-1	1	220		430 *
2	2BB-2-16-4	4	83	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	130
2	2BB-2-16-10	10			
2	2BB-2-17-1	1	110		
2	2BB-2-17-4	4	270		3000 *
2	2BB-2-17-10	10			
2	2BB-2-18-1	1	19		. 1111111111111111111111111111111111111
2	2BB-2-18-4	4	33		26
2	2BB-2-18-10	10			
2	2BB-2-20-1	1			
2	2BB-2-20-4	4			
2	2BB-2-20-10	10	Marie Company		
2	2BB-2-21-1	1			
2	2BB-2-21-4	4			
2	2BB-2-21-10	10			
2	2BB-2-22-1	1	57		
2	2BB-2-22-4	4	40		
2	2BB-2-22-10	10	.,		
2	2BB-2-22-15	15			
2	2BB-2-22-20	20			
2	2BB-2-22-25	25			

Notes follow at end of table.

BRC C-6 2BB Study 97400200.007\TABLE4.XLS Parcel B 10/30/97 Page 2 of 7

Boeing Realty Corporation, C-6 Facility Los Angeles, California

(F)	T
Sample ID (EPA 418.1) TRPH (EPA 418.1) TPH-E Diesel (EPA 8015M)	TPH-E Motor Oil (EPA 8015M)
Detection Limit (mg/kg) 10 10	10
2 2BB-2-23-1 1 14	
2 2BB-2-23-4 4 360	98 *
2 2BB-2-23-10 10	
2 2BB-2-23-15 15	
2 2BB-2-23-20 20 20	
2 2BB-2-23-25 25	
2 2BB-2-24-1 1 20	
2 2BB-2-24-4 4 53	66 *
2 2BB-2-24-10 10	
2 2BB-2-25-1 1 42	57 *
2 2BB-2-25-4 4 16	
2 2BB-2-25-10 10	
2 2BB-2-26-1 1 450	280 *
2 2BB-2-26-4 4 50	
2 2BB-2-26-10 10	
2 2BB-2-27-1 1 33	
2 2BB-2-27-4 4 99	
2 2BB-2-27-10 10	
2 2BB-2-28-1 1 67	78 *
2 2BB-2-28-4 4	
2 2BB-2-28-10 10	
2 2BB-2-29-1 1	
2 2BB-2-29-4 4	
2 2BB-2-29-10 10	
2 2BB-2-30-1 1 61	37 *
2 2BB-2-30-4 4 17	
2 2BB-2-30-10 10	
2 2BB-2-31-1 1 11	
2 2BB-2-31-4 4	
2 2BB-2-31-10 10	
2 2BB-2-31-15 15	
2 2BB-2-31-20 20	
2 2BB-2-31-25 25	
2 2BB-2-32-1 1 11	

Notes follow at end of table.

BRC C-6 2BB Study 97400200.007\TABLE4.XLS Parcel B 10/30/97 Page 3 of 7

Boeing Realty Corporation, C-6 Facility Los Angeles, California

Area	Sample ID	Depth (ft bgs)	TRPH (EPA 418.1)	TPH-E Diesel (EPA 8015M)	TPH-E Motor Oil (EPA 8015M)
	Detection Lir	nit (mg/kg)	10	10	10
2	2BB-2-32-4	4			
2	2BB-2-32-10	10			
2	2BB-2-32-15	15			
2	2BB-2-32-20	20			
2	2BB-2-32-25	25	11		
2	2BB-2-33-1	1			
2	2BB-2-33-4	4			
2	2BB-2-33-10	10			
2	2BB-2-33-15	15			
2	2BB-2-33-20	20			
2	2BB-2-33-25	25			
2	2BB-2-34-1	1	24		
2	2BB-2-34-4	4			
2	2BB-2-34-10	10			
2	2BB-2-34-15	15			
2	2BB-2-34-20	20			
2	2BB-2-34-25	25			
2	2BB-2-35-1	1	56		
2	2BB-2-35-4	4			
2	2BB-2-35-10	10			
2	2BB-2-35-15	15			
2	2BB-2-35-20	20	12		i.
2	2BB-2-35-25	25	13		
6	2BB-6-1-4	4			
6	2BB-6-1-10	10			
6	2BB-6-1-20	20			
6	2BB-6-1-30	30	1		
6	2BB-6-1-40	40			
6	2BB-6-1-50	50			
6	2BB-6-2-1	1			
6	2BB-6-2-4	4			
6	2BB-6-2-10	10			
6	2BB-6-2-20	20			
6	2BB-6-2-30	30		· · · · · · ·	

Notes follow at end of table.

BRC C-6 2BB Study 97400200.007\TABLE4.XLS Parcel B 10/30/97 Page 4 of 7

Boeing Realty Corporation, C-6 Facility Los Angeles, California

Area	Sample ID	Depth (ft	TRPH (EPA 418.1)	TPH-E Diesel (EPA 8015M)	TPH-E Motor Oil (EPA 8015M)
6	Detection Lir 2BB-6-2-40		10	10	10
6	2BB-6-2-50	40 50			
6	2BB-6-3-1	1			<u> </u>
6	2BB-6-3-4	4			
6	2BB-6-3-10	10			
6	2BB-6-3-20	20			
6	2BB-6-3-30	30			
6	2BB-6-3-40	40			
6	2BB-6-3-50	50			
6	2BB-6-4-4	4			
6	2BB-6-4-10	10			
6	2BB-6-4-20	20			
6	2BB-6-4-30	30			
6	2BB-6-4-40	40			
6	2BB-6-4-50	50			
6	2BB-6-5-2.0	2	23		
6	2BB-6-5-4.5	4.5	41		
6	2BB-6-5-9.5	9.5			
6	2BB-6-5-19.5	19.5			
6	2BB-6-5-29.5	29.5			
6	2BB-6-5-39.5	39.5			
6	2BB-6-5-49.5	49.5			
6	2BB-6-6-1.5	1.5	23	da i	
6	2BB-6-6-4.5	4.5			
6	2BB-6-6-9.5	9.5		, ,	
6	2BB-6-6-19.5	19.5			
6	2BB-6-6-29.5	29.5			
6	2BB-6-6-39.5	39.5	A		
6	2BB-6-6-50.5	50.5			
6	2BB-6-8-1	1:			
6	2BB-6-8-4	4	33		110 *
6	2BB-6-8-10	10			
6	2BB-6-8-15	15			
6	2BB-6-8-20	20			

Notes follow at end of table.

BRC C-6 2BB Study 97400200.007\TABLE4.XLS Parcel B 10/30/97 Page 5 of 7

Boeing Realty Corporation, C-6 Facility Los Angeles, California

Area	Sample ID	Depth (ft bgs)	TRPH (EPA 418.1)	TPH-E Diesel (EPA 8015M)	TPH-E Motor Oil (EPA 8015M)
	Detection Lir	nit (mg/kg)	10	10	10
6	2BB-6-8-25	25			
6	2BB-6-9-1	1	31		41 *
6	2BB-6-9-4	4	140		110 *
6	2BB-6-9-10	10	23		
6	2BB-6-9-15	15			
6	2BB-6-9-20	20			
6	2BB-6-9-25	25			
6	2BB-6-10-1	1	86		58 *
6	2BB-6-10-4	4	28		
6	2BB-6-10-10	10	Říle – I		
6	2BB-6-10-15	15			
6	2BB-6-10-20	20			
6	2BB-6-10-25	25			
6	2BB-6-11A-1	1	200		74 *
6	2BB-6-11A-4	4	32		34 *
6	2BB-6-11A-10	10			
6	2BB-6-11B-15	15			
6	2BB-6-11B-20	20			
6	2BB-6-11B-25	25			
6	2BB-6-12-1	1	73		
6	2BB-6-12-4	4	40		
6	2BB-6-12-10	10	16		
6	2BB-6-12-15	15		<u> </u>	
6	2BB-6-12-20	20			
6	2BB-6-12-25	25			
6	2BB-6-13-1	1	35°0' 3 LE		
6	2BB-6-13-4	4			
6	2BB-6-13-10	10	Bal remains		
6	2BB-6-13-15	15	<u> </u>		
6	2BB-6-13-20	20	######################################		
6	2BB-6-13-25	25	18		
6	2BB-6-14-1	1	28		<i>2</i> .
6	2BB-6-14-4	4	30		·
6	2BB-6-14-10	10	28		
<u>_</u>	200 0 17-10	10	20		

Notes follow at end of table.

BRC C-6 2BB Study 97400200.007\TABLE4.XLS Parcel B 10/30/97 Page 6 of 7

Boeing Realty Corporation, C-6 Facility Los Angeles, California

Area	Sample ID Detection Lir	Depth (ft bgs)	ы ТКРН (ЕРА 418.1)	O TPH-E Diesel (EPA 8015M)	TPH-E Motor Oil (EPA 8015M)
6	2BB-6-14-15	15			
5	2BB-6-14-20	20			
6	2BB-6-14-21	21			
6	2BB-6-14-25	25			
6	2BB-6-15-1	1	27		
6	2BB-6-15-4	4	17		
6	2BB-6-15-10	10			
6	2BB-6-15-15	15			
6	2BB-6-15-20	20			
6	2BB-6-15-25	25			
6	2BB-6-16-1	1			
6	2BB-6-16-4	4			
6	2BB-6-16-10	10			
6	2BB-6-16-15	. 15			
6	2BB-6-16-20	20			
6	2BB-6-16-25	25			
6	2BB-6-17-1.5	1.5			
6	2BB-6-17-4.5	4.5			
6	2BB-6-17-9.5	9.5			
6	2BB-6-17-19.5	19.5			
6	2BB-6-17-29.5	29.5			
6	2BB-6-17-39.5	39.5			
6	2BB-6-17-49.5	49.5			

Unshaded (blank) cell indicates sample was not analyzed for constituent Shaded cell indicates constituent result was below the detection limit

^{* -} Sample chromatogram does not match standard gasoline chromatogram

TABLE 5 CHEMICAL ANALYTICAL RESULTS: SEMI-VOLATILE ORGANIC COMPOUNDS (EPA Method 8270)

Boeing Realty Corporation, C-6 Facility Los Angeles, California

ens(a,h)anthracene	ᅙ		T	T	T	T		T	T	Ī			Τ	Γ							Γ	Ī		Γ		Ī	<u> </u>	T		Γ	
Сунузепе	豆			t	t	T	t		T	1					 	T	T				T	T	<u> </u>	T				-			Н
t-Chlorophenyl phenyl ether	ᅙ			<u> </u>		<u> </u>	T	ŀ	İ	T		-	T					 				\vdash	\vdash						H		
lonephenol	<u>5</u>		T	T			Ť				<u> </u>								ļ			<u> </u>			\vdash				r		Н
t-Chloro-3-methylphenol	<u>6</u>					T														T		T						H	\vdash		
9-Chloronaphthalene	5											T					l	r		<u> </u>	<u> </u>										П
4-Chloroaniline	8																				-					<u> </u>					H
Butyl benzyl phthalate	5		ľ																		H									H	
4-Bromophenyl phenyl ether	ŝ					F				l								Г										_			Н
Bis(2-ethylhexyl)phthalate	8										270				120							120				260				170	
Bis(2-chlorolsopropyl)ether	100																									-					Н
Bis(2-chloroethyl)ether	100																														
Bis(2-chloroethoxy)methane	100																														
Benzyl alcohol	100																														
Benzo(a)pyrene	250																														
Benzo(g,h,l)perylene	250																														
Benzo(k)fluoranthene	250																														
Benzo(b)fluoranthene	250					3,11																									
Benzantins(s)zned	5																														
Benzoic acid	250																														
Benzidine	8																														
Anthracene	8																														
enilinA	8																					-									\dashv
усепарћthylene	<u>\$</u>						H												17						9.5						-
Аселаріті	<u>5</u>	-																												-	\dashv
£	/kg)	-	4	5	-	4	9	4	5	F	4	9	-	4	2	-	4	10	1	4	10	-	4	ę	-	4	10	2	2	6	19
Depth (bgs)	imit (ug	_	L	_	_		_	_	_				<u> </u>																		_ .
e ID	Detection Limit (ug/kg)								_															۰	.	4	.10	-2.0	-5.0	9.0	2 2BB-2-11B-19.0 19
Sample ID	Dete	2BB-2-3-1	2BB-2-3-4	288-2-3-10	288-2-4-1	2BB-2-4-4	2BB-2-4-10	2BB-2-5-4	288-2-5-10	2BB-2-6-1	2BB-2-6-4	2BB-2-6-10	288-2-7-1	28B-2-7-4	28B-2-7-10	2BB-2-8-1	2BB-2-8-4	2BB-2-8-10	2BB-2-9-1	2BB-2-9-4	2BB-2-9-10	2BB-2-10-1	2BB-2-10-4	2BB-2-10-10	2BB-2-11A-1	2BB-2-11A-4	2BB-2-11A-10	2BB-2-11B-2.0	2BB-2-11B-5.0	2BB-2-11B-9.0	2BB-2-11B-19.0
		2BE	2BE	2BE	2BE	2BE	2BE	2BE	78B	388	2BB	2BB	2BB	2BB	28B	2BE	2BE	2BE	2BE	2BE	2BE	2BB	2BB	288	2BB	2BB	2BB	2BB	2BB	2BB	2BE
Area		2	2	7	2	2	2	2	2	7	7	7	2	2	7	2	2	2	2	2	2	2	2	2	2	2	7	2	2	2	7
												!																			

Shaded cell indicates constituent result was below the detection limit.

TABLE 6 CHEMICAL ANALYTICAL RESULTS: SEMI-VOLATILE ORGANIC COMPOUNDS (EPA Method 8270)

Boeing Realty Corporation, C-6 Facility Los Angeles, California

z-Wethylphenol	5		T		Γ	ľ	Τ	1				Τ	Τ	Γ	Ī	Τ	Γ				ĺ	Τ	Ι	Τ	Τ	Ι	T	Τ	Γ	Γ	Τ	Ì
eneisritidsniviteM-2	8				T	T		-		İ		T	T	T	T		-		T	\vdash			\vdash	\dagger				L		H	Ħ	
sophorone	<u>\$</u>	┢	T		h	-	1	t	T	T			T				T	T			-	-	 	T	f	H	1	H	_		\vdash	
enervq(bɔ-ɛ,ᡗ,t)onebnl	250		-						l	T		T					k		H	\vdash	ļ		-		 	H	-		\vdash			
Hexachloroethane	8		l						r		1							l		H						\vdash		-	H	\vdash	H	
Hexachlorocyclopentadlene	ē				r																		T		-	-				H	╁	
Hexachlorobutadiene	18	-								H													\vdash	H				H		H	\vdash	
Hexachlorobenzene	100																					H								<u> </u>		
Fluorene	100																					\vdash			H					H		
Fluoranthene	8																													H	-	
Di-n-octyl phthalate	8																					H									l	
eneutototinid-8,5	20																															
eneulototiinid-4,2	22																			8.13												
lonerdowiniG->,S	8																															
#.6-Dinitro-2-methylphenol	8																															
Oimethyl phthalate	ᇹ																															!
oneńdlyńsemid-4,2	8																															
Diethyl phthalate	5																											***				
2,4-Dichlorophenol	ŝ																															
3,3'-Dichlorobenzidine	8																															
1,2-Dichlorobenzene	§																															
4-Dichlorobenzene	5 8																															
1,3-Dichlorobenzene	<u>\$</u>																															
Di-n-butyl phthalate	, ,								-																						H	i iii
Dibenzofuran	100	_				Н				-														-	_	-	-	-	<u> </u>	H	Н	- 17-17-1
	Ш	-	4	10	1	4	10	4	5	-	4	2	-	4	5	-	4	10	-	4	10	-	4	10	-	4	9	2	5	6	19	44.
Depth (ft bgs)	nlt (ug/				L								L		L									<u> </u>								alad an
Sample ID	Detection Limit (ug/kg)	2BB-2-3-1	2BB-2-3-4	2BB-2-3-10	2BB-2-4-1	2BB-2-4-4	2BB-2-4-10	2BB-2-5-4	2BB-2-5-10	2BB-2-6-1	2BB-2-6-4	2BB-2-6-10	2BB-2-7-1	2BB-2-7-4	2BB-2-7-10	2BB-2-8-1	2BB-2-8-4	2BB-2-8-10	288-2-9-1	288-2-9-4	2BB-2-9-10	2BB-2-10-1	2BB-2-10-4	2BB-2-10-10	2BB-2-11A-1	2BB-2-11A-4	2BB-2-11A-10	2BB-2-11B-2.0	2BB-2-11B-5.0	2BB-2-118-9.0	2BB-2-11B-19.0	
Area		2	2	2	2	2	2	2	2	2		2	2	2	2	2	2	2	2	2	2		2		2			2	2	2		And the State of the state of

Shaded cell indicates constituent result was below the detection limit.

TABLE 5
CHEMICAL ANALYTICAL RESULTS:
SEMI-VOLATILE ORGANIC COMPOUNDS (EPA Method 8270)

Area								2 288			2 2BB										2 2BB				2 2BB				2 2BB		2 2BB	t result was below the detection limit
Sample ID	Detection Limit (ug/kg)	2BB-2-3-1	2BB-2-3-4	2BB-2-3-10	2BB-2-4-1	2BB-2-4-4	2BB-2-4-10	2BB-2-5-4	2BB-2-5-10	2BB-2-6-1	2BB-2-6-4	2BB-2-6-10	2BB-2-7-1	288-2-7-4	2BB-2-7-10	2BB-2-8-1	2BB-2-8-4	2BB-2-8-10	2BB-2-9-1	2BB-2-9-4	2BB-2-9-10	2BB-2-10-1	2BB-2-10-4	2BB-2-10-10	2BB-2-11A-1	2BB-2-11A-4	2BB-2-11A-10	2BB-2-11B-2.0	2BB-2-11B-5.0	2BB-2-11B-9.0	2BB-2-11B-19.0	the detection lim
Depth (ft bgs)	it (ug/kg)	1	4	10	1	4	5	4	9	-	4	10	-	4	10	1	4	10	1	4	10	1	4	10	-	4	10	2	5	6	19	
t-Methylphenol	100																															
enelsdfdqsV	100																															
enliinsottiM-S	250																															
enilinsouliV-8	8																															
4-Nitrobasses	250																						1101									
Nitrobenzene 2-Nitrophenol	100																															
foner(qoniN-A	8																															
-Nitrosodiphenylamine	1																															
N-Mitroso-di-n-propylamine	<u>5</u>																															
enimsiyrisemibozotiiN-N	5																															
Pentachlorophenot	250																															1
Phenathrene	8																	-				-			-		-		-		L	
Phenol	8												-		-		-					-			-		1		<u> </u>	_	-	$\frac{1}{1}$
۱٬۷٫4-Trichlorobenzene	8				L		ŀ			L						-		L				-			_		_	L		-	L	
t,4,5-Trichlorophenol	100													L		_	-				-	_				_	L	_	L			
lonahdorohT-8,4,8	1																															

Shaded cell indicates constituent result was below the detection limit.

TABLE 5
CHEMICAL ANALYTICAL RESULTS:
SEMI-VOLATILE ORGANIC COMPOUNDS (EPA Method 8270)

Dibenz(a,h)anthracene	8								6 -																	Γ					П
Сунузепе	18																												150		
4-Chlorophenyl phenyl ether	100																												П		П
S-Chlorophenol	100																														
4-Chloro-3-methylphenol	18												1 1 1									. :						i i i i i i			
Z-Chloronaphthalene	18																														
4-Chloroaniline	18																														
Butyl benzyl phthalate	100																					3.1.3 3.1.3 3.1.3 3.1.3		Г							
4-Bromophenyl phenyl ether	100																												П		
Bis(2-ethylhexyl)phthalate	9											120						140											230	110	
Bis(2-chloroisopropyi)ether	8																														
Bis(2-chloroethyl)ether	18																														
Bis(2-chloroethoxy)methane	100																														
Benzyi alcohol	1																														
Benzo(a)pyrene	250																														
geuzo(â'µ'ı)beuklene	lß.																														
Benzo(k)fluoranthene	쭚																														
Benzo(b)fluoranthene	8																														
Benz(a)anthracene	8																												170		
Benzoic acid	20																														
Banzidine	8																														\vdash
Anthracene	901																														
enilin A	8																														
y ziji z v	100																			<u></u>											
Acenaphthene	9													-	<u>::.:</u>				- 1									-	Н		
	L_	59	39	64	-	4	01	-	4	9	4	9	-	4	5	-	4	10	-	4	10	_	4	5	-	4	5	-	4	10	-
Depth (ft bgs)	nit (ug/																														
Sample ID	Detection Limit (ug/kg)	2BB-2-11B-29.0	2BB-2-11B-39.0	2BB-2-11B-49.0	2BB-2-12-1	2BB-2-12-4	2BB-2-12-10	2BB-2-13-1	2BB-2-13-4	2BB-2-13-10	2BB-2-14-4	2BB-2-14-10	2BB-2-15-1	2BB-2-15-4	2BB-2-15-10	2BB-2-16-1	2BB-2-16-4	2BB-2-16-10	2BB-2-17-1	2BB-2-17-4	2BB-2-17-10	2BB-2-18-1	2BB-2-18-4	2BB-2-18-10	2BB-2-20-1	2BB-2-20-4	2BB-2-20-10	2BB-2-21-1	2BB-2-21-4	2BB-2-21-10	2 2BB-2-22-1 1
Area		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

Shaded cell indicates constituent result was below the detection limit.

TABLE 5
CHEMICAL ANALYTICAL RESULTS:
SEMI-VOLATILE ORGANIC COMPOUNDS (EPA Method 8270)

Los Angeles, California		
	ŀ	_

Area	ă	2 2BB-2-11B-29.0	2 2BB-2-11B-39.0	2 2BB-2-11B-49.0	2 28B-2-12-1	2 2BB-2-12-4	2 2BB-2-12-10	2 2BB-2-13-1	2 2BB-2-13-4	2 288-2-13-10		2 2BB-2-14-10	2 288-2-15-1	2 2BB-2-15-4		2 2BB-2-16-1	2 288-2-16-4						2 2BB-2-18-4	2 2BB-2-18-10	2 288-2-20-1	2 2BB-2-20-4	2 2BB-2-20-10	2 28B-2-21-1	2 288-2-21-4	2 2BB-2-21-10	2 288-2-22-1
Sample ID	Detection Limit (ug/kg)	1B-29.0	1B-39.0	1B-49.0	2-1	2-4	2-10	3-1	3-4	3-10	4-4	4-10	5-1	54	5-10	6-1	6-4	6-10	7-1	4	7-10	8-1	8-4	8-10	0-1	94	0-10	1-1	1-4	1-10	2-1
Depth (ft. bgs)	it (ug/kg)	58	39	49	1	4	10	1	4	10	4	10	1	4	10	1	4	10	-	4	10	-	4	10	1	4	10	1	4	10	-
Dibenzofuran	100																														
Di-n-butyl phthalate	250																														
eneznedoroldəlG-£,f	100																														
enaznedorold⊐-A,1	100																														
eneznedoroldəlG-S,1	100																														
3,3'-Dichlorobenzidine	100																														
lonephenol	100																														
Diethyl phthalate	100																														
lonedqlynamid-⊅,2	5																														
Dimethyl phthalate	5																														H
lonadqiydtam-S-ottiniG-3,‡	100																														
lonerdoninid-4,2	18								1																						
eneuložoržiniG-4,2	250									1																1					
eneulotottinid-8,S	8								1																			1		-	
Di-n-octyl phthalate	ᇛ																											\vdash	-	-	
Fluoranthene	100																						-			1			470		H
Fluorene Hexachlorobenzene	<u>8</u>						-					\vdash				_		7			_		_		<u> </u>		H	-	.	 	\perp
Hexachlorobutadiene	8														<u> </u>			L	<u> </u>	-	_						1	ļ	-	_	+
Hexachlorocyclopentadiene	8		<u> </u>								-	-					-	 			-		_	-		-	_	\vdash	\vdash	-	H
Hexachloroethane	1001							-				_			<u> </u>						ļ		_			-	_	_	<u> </u>	<u> </u>	Ļ
enenyq(bɔ-ɛ,2,t)onebnl	100 25		-									L			-									L	<u> </u>	<u> </u>	<u> </u>	L	_	_	L
sophorone	JI	1.		-	L	<u> </u>		<u> </u>	-															_			_	<u> </u>	L	Ĺ	
2-Methylnaphthalene			_	L	_	L		L		_	L	_		L		L		L	L	<u> </u>					L		L	L			l

TABLE 5
CHEMICAL ANALYTICAL RESULTS:
SEMI-VOLATILE ORGANIC COMPOUNDS (EPA Method 8270)

			_	,	_	,				_	_	_	_								_				_						
2,4,6-Trichlorophenoi	18				1														ľ												
lonengoroldɔlrT-č,4,5	100																														T
eneznedorold⊃i1T-≯,2,t	100											Ī																		Г	Γ
Pyrene	<u>8</u>																	ŀ					-			ļ	T		300		l
Phenol	8														h	170									-	H	-				
Phenanthrene	100												!															\vdash	320		
Pentachlorophenol	250																														L
N-Nitrosodimethylamine	180																														
	100																														
N-Nitroso-di-n-propylamine	8																														\vdash
N-Nitrosodiphenylamine	8																														
(-Ијфорћепој	1001																														
Z-Nitrophenol																															
Vitrobenzene	100		300																												
	250																														
enllinsoùiV-8	250																														
enilinsortiM-2	250																														
ənəlsrtriqsM	100																														
loneriqiyriteM-P	100																														
Depth (ft bgs)	it (ug/kg)	53	39	49	1	4	5	1	4	9	4	10	-	4	10	1	4	10	1	4	10	1	4	5	-	4	5	F	4	10	-
Sample ID	Detection Limit (ug/kg)	2BB-2-11B-29.0	2BB-2-11B-39.0	2BB-2-11B-49.0	2BB-2-12-1	2BB-2-12-4	2BB-2-12-10	2BB-2-13-1	2BB-2-13-4	2BB-2-13-10	2BB-2-14-4	2BB-2-14-10	2BB-2-15-1	2BB-2-15-4	2BB-2-15-10	288-2-16-1	2BB-2-16-4	2BB-2-16-10	288-2-17-1	288-2-17-4	2BB-2-17-10	2BB-2-18-1	2BB-2-18-4	2BB-2-18-10	2BB-2-20-1	2BB-2-20-4	2BB-2-20-10	2BB-2-21-1	2BB-2-21-4	2BB-2-21-10	2BB-2-22-1
Area					2																							2		2	2

Shaded cell indicates constituent result was below the detection limit.

TABLE 5
CHEMICAL ANALYTICAL RESULTS:
SEMI-VOLATILE ORGANIC COMPOUNDS (EPA Method 8270)

	н -	-	_		_	_			_			_					,	,				, _	_								
eneosrithis(fi,s)snediC	ş																								l						
Chrysene	5															Γ							-						Γ		
t-Chlorophenyl phenyl ether	ş																														
s-Chlorophenol	2				T			T					ŀ															T	<u>† </u>	T	
4-Chloro-3-methylphenol	5							T	T																		T		T	T	
2-Chloronaphthalene	5		1								T	1													T	T			T	T	
4-Chloroaniline	5				Γ						Ť															T		T	T	<u> </u>	┢
Butyl benzyl phthalate	5							†			T	Ī	1	ŀ													_	T	T	T	-
4-Bromophenyl phenyl ether	5	T						T																	-		\vdash		1	┢	
Bis(2-ethylhexyl)phthalate	5																						22				<u> </u>			 	120
Bis(2-chloroisopropyl)ether	\$							T																					┢	H	
Bis(2-chloroethyl)ether	18																														
Bis(2-chloroethoxy)methane	18																								1						
Benzyl alcohol	1 8																														
Benzo(a)pyrene	250																														
Benzo(g,h,l)perylene	250																														
Benzo(k)fluoranthene	IX.										1										34 20										
Benzo(b)fluoranthene	250																oc.														
Benz(a)anthracene	8									ľ																					
Benzolc acid	250																														
enibizneB	200																			8. A											
Anthracene	100							T																							
ənilinA	100										Г																	11.7			
Acenaphthylene	100																						-								
Acenaphthene	100	-					-									П										-					
Depth (ft bgs)	g/kg)	4	9	15	8	25	-	4	5	15	22	25	-	4	10	1	4	10		4	10	1	4	10	-	4	9	-	4	10	F
D e g	Detection Limit (ug/kg)	L	_	-	_		L	-	_					ļ										_	_	_		_	L		\vdash
<u>o</u>	ction L		 မူ	5	၉	55	_		٥	5	ြု	Ži		٠	0			٥			0									0	
Sample ID	Dete	28B-2-22-4	2BB-2-22-10	2BB-2-22-15	2BB-2-22-20	288-2-22-25	2BB-2-23-1	2BB-2-23-4	2BB-2-23-10	2BB-2-23-15	2BB-2-23-20	2BB-2-23-25	2BB-2-24-1	2BB-2-24-4	2BB-2-24-10	2BB-2-25-1	2BB-2-25-4	2BB-2-25-10	2BB-2-26-1	2BB-2-26-4	2BB-2-26-10	28B-2-27-1	28B-2-27-4	2BB-2-27-10	2BB-2-28-1	2BB-2-28-4	2BB-2-28-10	2BB-2-29-1	288-2-29-4	2BB-2-29-10	2BB-2-30-1
		286	286	2BB	2BB	288	78B	2BB	288	3B	288	2BB	2BB	288	2BB	2BB	2BB	288	288	2BB	2BB	28B	2BB	2BB	2BB	2BB	2BB	2BB	2BB	2BB	288
Area		2	2	2	7	2	2	2	2	2	2	2	2	2	2	2	2	7	2	2	2	2	2	2	7	7	2	7	2	2	2

Shaded cell indicates constituent result was below the detection limit.

TABLE \$
CHEMICAL ANALYTICAL RESULTS:
SEMI-VOLATILE ORGANIC COMPOUNDS (EPA Method 8270)

Area		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Sample ID	Detection Limit (ug/kg)	288-2-22-4	2BB-2-22-10	2BB-2-22-15	2BB-2-22-20	288-2-22-25	2BB-2-23-1	2BB-2-23-4	2BB-2-23-10	2BB-2-23-15	2BB-2-23-20	2BB-2-23-25	2BB-2-24-1	2BB-2-24-4	2BB-2-24-10	288-2-25-1	2BB-2-25-4	2BB-2-25-10	2BB-2-26-1	288-2-26-4	2BB-2-26-10	288-2-27-1	288-2-27-4	2BB-2-27-10	2BB-2-28-1	2BB-2-28-4	2BB-2-28-10	2BB-2-29-1	2BB-2-29-4	2BB-2-29-10	2BB-2-30-1
Depth (ft bgs)	nit (ug/kg)	4	10	15	20	25	1	4	10	15	20	25	1	4	10	1	4	10	-	4	10	1	4	10	-	4	10	1	4	10	-
Dibenzofuran	100					-														<u>1</u>					<u> </u>		Н		Н		
Di-n-butyi phthalate	250				-	 F _{1.1}			Н			3:					-			-	1, 1				:	H			Н		
anaznadoroldɔld-ɛ,ˈf	9																				1. 34										
4-Dichlorobenzene	100																														
3,3'-Dichlorobenzidine	100																														
lonedqoroldold-A,2	100																														
Diethyl phthalate	100 100																														
2,4-Dimethylphenol	L																														
Dimethyl phthalate	نـــا																														
loneriqiyrism-S-oʻtinid-8,4	Ш																														
lonerdoutinid-A,S	Щ																														
eneulototinid-A,2	250																														
eneulotortiniG-8,2	။ အ ။																														
Di-n-octyl phthalate																										-					
Fluoranthene Fluorene	8				-																			-	-		<u> </u>			H	L
Hexachlorobenzene	8										_	_															<u> </u>			-	L
Hexachlorobutadiene	100																								-		L	L		_	L
Hexachlorocyclopentadiene	ll .											-															L		L		Ļ
Нехасиюствен	<u> </u>									_													L			L				L	L
enenyq(bɔ-ɛ,2,t)onebnl	IL																														
sophorone	8							-		 												-		l					\vdash		H
2-Methyinaphthalene	흉	ı	l.	1	1				ĺ	1	1	1							1		l	l	ĺ	1	1	1		l	İ		1

Shaded cell indicates constituent result was below the detection limit.

TABLE 5
CHEMICAL ANALYTICAL RESULTS:
SEMI-VOLATILE ORGANIC COMPOUNDS (EPA Method 8270)

Area								2 2BI																			2 2B				
Sample ID	Detection Limit (ug/kg)	2BB-2-22-4	2BB-2-22-10	2BB-2-22-15	2BB-2-22-20	2BB-2-22-25	2BB-2-23-1	2BB-2-23-4	2BB-2-23-10	2BB-2-23-15	2BB-2-23-20	2BB-2-23-25	288-2-24-1	288-2-24-4	2BB-2-24-10	2BB-2-25-1	2BB-2-25-4	2BB-2-25-10	2BB-2-26-1	2BB-2-26-4	2BB-2-26-10	2BB-2-27-1	2BB-2-27-4	2BB-2-27-10	2BB-2-28-1	2BB-2-28-4	2BB-2-28-10	2BB-2-29-1	2BB-2-29-4	28B-2-29-10	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Depth (ft bgs)	it (ug/kg)	4	10	15	20	25	1	4	10	15	20	25	1	4	10	1	4	10	-	4	10	1	4	10	1	4	10	1	4	9	_
1000401114000	100																														
500[54,400]	100																														L
9-Nitroaniine	250																														
	250																														
	250																					7									
1	100																														
lonodnostid	100																														
***************************************	100 100																			_											
onimplyment a lb eservice	100																														
	100																					:									
100040001400400	250																														
Рһелаптыгеле	100																														
	100								1											\dashv				-							
	9																			1											
	9				landi Post	. 19								-							1		: <u>:</u>				+	\dashv			-
2,4,5-Trichlorophenol	9												٠					. [T			1

Shaded cell indicates constituent result was below the detection limit.

TABLE 5
CHEMICAL ANALYTICAL RESULTS:
SEMI-VOLATILE ORGANIC COMPOUNDS (EPA Method 8270)

	-,-		_					_	_		_														_		
olbenz(a,h)anthracene	18																	Γ									T
рѝхеие	12														T			T	T	Ī	T		T			1	T
-Chlorophenyl phenyl ether	8	T							T			T	1	1			1				T	T			r		T
loneherol	8	T	<u> </u>		T				T	1	T					T			T	t			T	-			-
-Chloro-3-methylphenoi	ē	İ			T		T		_	Ħ		T				ľ		-	l	T			T	T	 -	T	t
-Chloronaphthalene	ē			h				1	 		H										 	1	T			 	t
-Chloroaniline	ē																						T			Ħ	t
Butyl benzyl phthalate	ē								T												<u> </u>	Ī					T
l-Bromophenyl phenyl ether	ā																										l
ejs(2-ethylhexyl)phthalate	8						3600		84							670	88			8			120	8		L	-
3is(2-chlorolsopropyl)ether	8																		-	\vdash			\vdash	-			
Jethe(lynheorold2-2)zig	8								1	1												1					-
3is(2-chloroethoxy)methane	g																										
genzyl alcohol	8																										-
geuzo(s)bλιευe	250																										
genzo(g,h,i)perylene	뎞																										
Benzo(k)fluoranthene	ᇟ			2																							
Benzo(b)fluoranthene	8																										
Benz(a)anthracene	8																										
Benzoic acid	8																										
Benzidine	8																										
enescene	8																										
enilinA	8																										
y cenaphthylene	8				\vdash					-					-		1					-					
Аселарһұһепе	100		H		\vdash			a. 5	H								ļ					-	<u> </u>			\vdash	-
		4	5	-	4	10	15	20	52	-	4	10	15	20	52	1	4	10	15	20	25	-	4	10	15	20	25
Depth (ff	mit (ug							L	_	<u> </u>	L																L
<u>a</u>	Detection Limit (ug/kg)		0			0	5	0	'n			0	5	0	5			0	5	0	5			0	5		r.
Sample ID	Dete	2BB-2-30-4	2BB-2-30-10	2BB-2-31-1	2BB-2-31-4	2BB-2-31-10	2BB-2-31-15	2BB-2-31-20	2BB-2-31-25	2BB-2-32-1	2BB-2-32-4	288-2-32-10	2BB-2-32-15	2BB-2-32-20	2BB-2-32-25	2BB-2-33-1	2BB-2-33-4	2BB-2-33-10	288-2-33-15	2BB-2-33-20	288-2-33-25	2BB-2-34-1	2BB-2-34-4	2BB-2-34-10	2BB-2-34-15	2BB-2-34-20	2BB-2-34-25
		2BE	2BE	2BE	2BE	2BE	2BE	2BE	2BE	2BE	2BE	2BE	2BE	2BE	2BE	2BE	2BE	2BE	2BE	2BE	2BE	28B	2BB	2BB	2BE	2BE	288
Area		2	2	2	2	2	2	2	2	2	2	2	7	2	7	2	2	2	2	2	2	2	2	2	2	2	2

Shaded cell indicates constituent result was below the detection limit

Shaded cell indicates constituent result was below the detection limit.

TABLE 5
CHEMICAL ANALYTICAL RESULTS:
SEMI-VOLATILE ORGANIC COMPOUNDS (EPA Method 8270)

-Methylphenol	8	Τ			T	Τ	Τ	T	T			T	Τ	Τ	Γ	Τ	Τ	Τ			T	T		Γ	Τ	Γ	
-Methylnaphthalene	<u>\$</u>	ľ		T					T			t		\dagger	-	-		T	İ			 		t		İ	_
sophorone	8					T	T	l					T			T	T			Ī	T					T	T
eneryq(bɔ-ɛ,2,1,onebn	250												Ī		-					:	-		1			T	<u> </u>
enschloroethane	8			Ī												T			İ	T							_
lexachlorocyclopentadlene	8						Ī														_						
lexachlorobutadiene	豆																										
- lexachiorobenzene	ā																										
eneroul	\$																										-
=nerthranul=	\$																										
Oi-n-octyl phthalate	550																										
eneulotortiniG-8,5	250																										
eneulototinid-A,S	250																										
lonerdortinid-4,5	5																										
6,6-Dinitro-2-methylphenol	ŝ																										
Dimethyl phthalate	8																										
2,4-Dimethylphenol	100																										
Diethyl phthalate	100																									2000	
2,4-Dichlorophenol	100																2000								See 140		
3,3'-Dichlorobenzidine	100																										
1,2-Dichlorobenzene	100																										
eneznedorold-b,î	100																										
1.3-Dichlorobenzene	9																										
Di-n-butyl phthalate	250																										
Dibenzofuran	5																									-	
Depth (ft bgs)	ıg/kg)	4	10	1	4	10	15	20	25	+	4	5	15	8	25	1	4	5	15	50	22	1	4	5	15	8	25
De De	Limit (t			_					_	Н	H	-		_	-		\dashv	\dashv					_		Н	\dashv	\dashv
Sample ID	Detection Limit (ug/kg)	4	10	Ţ.	4	10	15	50	25	_	4	5	15	8	25		4	9	15	8	25		4	ē	15	8	55
Samp	Det	2BB-2-30-4	2BB-2-30-10	2BB-2-31-1	2BB-2-31-4	2BB-2-31-10	2BB-2-31-15	2BB-2-31-20	2BB-2-31-25	2BB-2-32-1	2BB-2-32-4	2BB-2-32-10	288-2-32-15	2BB-2-32-20	2BB-2-32-25	2BB-2-33-1	2BB-2-33-4	2BB-2-33-10	2BB-2-33-15	2BB-2-33-20	2BB-2-33-25	2BB-2-34-1	28B-2-34-4	288-2-34-10	2BB-2-34-15	2BB-2-34-20	2BB-2-34-25
		2B	2B	2BI	2BI	3BI	2Bi	2Bt	2Bt	2Bt	2Bt	3BF	ZBE		2BE	286	2BE	2BE	以	2BE	2BE	2BE	2BE	2BE	2BE	2BE	2BE
Area		2	7	2	2	2	2	2	2	2	7	2	2	7	2	7	2	7	2	2	7	7	7	2	2	7	2

Shaded cell indicates constituent result was below the detection limit

Shaded cell indicates constituent result was below the detection limit.

TABLE 5
CHEMICAL ANALYTICAL RESULTS:
SEMI-VOLATILE ORGANIC COMPOUNDS (EPA Method 8270)

lonedqoroldɔirī-8,4,2	100					[:	T				Γ					:		Γ	Γ		Γ	Γ		Γ		Γ	Γ
lonendoroldɔirT-ō,₺,ऽ	100									<u> </u>																	T
1,2,4-Trichlorobenzene	100																										
Pyrene	8																										
Phenol	100																										
Phenanthrene	100	3																									
Pentachlorophenol	250																										
A-Nitrosodimethylamine	100																										
N-Nitroso-dl-n-propylamine	100																										
enimsiynedqibosotiM-M	9																										
lonedqoʻʻtil-A	100																										
lonendo'viV-S	100																										
eneznedoùlv	18																										
enilinsotii/-	250																										
3-Nitroaniline	250																										
enilinsotil/-S	250																										
Maphthalene	100																										
-γ-Wethylphenol	100																										
Depth (ft bgs)	ilt (ug/kg)	4	10	1	4	10	15	20	25	l l	4	10	15	70	25	1	7	10	15	20	25	1	4	10	15	20	25
Sample ID	Detection Limit (ug/kg)	288-2-30-4	2BB-2-30-10	2BB-2-31-1	288-2-31-4	288-2-31-10	2BB-2-31-15	2BB-2-31-20	288-2-31-25	288-2-32-1	2BB-2-32-4	2BB-2-32-10	2BB-2-32-15	2BB-2-32-20	2BB-2-32-25	2BB-2-33-1	2BB-2-33-4	2BB-2-33-10	2BB-2-33-15	2BB-2-33-20	2BB-2-33-25	2BB-2-34-1	2BB-2-34-4	2BB-2-34-10	288-2-34-15	2BB-2-34-20	2BB-2-34-25
Area		2	2		2	2	2	2		2			2		2	2	2	2		2			2				

Shaded cell indicates constituent result was below the detection limit

Shaded cell indicates constituent result was below the detection limit.

TABLE 6
CHEMICAL ANALYTICAL RESULTS: TITLE 22 METALS

	2 _	250	8	亍	88	28	37	75	8	ī	8	3 18	3 2	5 6	15	3 6	3 2	5 2	5 5	ाः	- 5	2 1	31.	श्र	<u> </u>	1 8	4	7	4	14	ά	32	99	26	S	47	7.9	Ñ	21	1-	36	မြွ	5	51	T =	듄	6	5
Zinc FPA 6010	(mg/kg)		2000																									"				(*)	"	"	(,	4	7	2			7	"	4	5	3	3	4	4
Vanadium EPA 6010	(mg/kg)	24	2400	0.5	24	22	29	21	27	22	23	28	2	54	37	2	33	3 8	8 6	200	2 2	\$ 7	7 20	8 8	3 6	23 23	30	9	31	24	29	S	26	9	27	24	5.3	19	17	33	26	27	29	33	27	23	33	8
Thallium EPA 6010	(mg/kg)	0.7	700	5.0															T	T							Ī																					
Silver EPA 6010		5.0	200	0.1																T		1	T		Ī												<u> </u>										,	
Selenium EPA 6010		1.0	100	1.0																																												
Nickel EPA 6010	-	20	2000	0.5	9.7	12	11	9	12	9.1	12	13	12	18	1 4	7	18	2 4	2	5 5	5 5	i Ç	2 4	2 6	ę	2 =	12	8.9	4	Ξ	15	4	14	7.3	8.7	13	2.5	12	9.7	4	9	4	13	4	9	12	15	13
Molybdenum EPA 6010		350	3500	0.5																																												
	(mg/kg)	0.2	8	0.01																																												
Cobalt Copper Lead Mercury EPA 6010 EPA 6010 EPA 7471	(mg/kg)	<u> </u>	1000	1.0																											7.0																	
Copper EPA 6010 E	(mg/kg)		2500	0.1	7.9	7.8	13	8.9	10	9.7	12	14	F	25	23	12	18	23	7	. 4	2 6	9	12	. 4	9.0	1	92	6.7	13	11	16	12	14	7.7	15	22	1.7	8	6.5	17	0.6	1	18	15	=	9.7	15	16
Cobalt EPA 6010	(mg/kg)	8	9000	0.5	9.9	6.3	5.5	0.9	7.1	4.8	8.8	7.3	8.8	Ξ	7.9	6.7	9.7	0 6	7.7	7.5	8	6	20	12	20,7	7.6	7.2	5.8	7.1	6.5	9.4	7.8	6.9	4.1	3.9	47	1.0	6.9	6.5	8.1	7.1	8.8	6.7	8.0	7.4	7.5	8.1	8.3
Chromium Tot. EPA 6010	╗	099	2500	0.05	20	21	28	17	21	20	20	25	18	35	29	13	31	98	17	24	77	13	38	19	4	22	26	13	25	22	25	24	25	17	28	35	9.2	19	4	28	19	26	25	30	21	20	31	59
Chromium VI EPA 7196	(mg/kg)	5.0	200	0.5										· S																																		
Cadmium EPA 6010	(mg/kg)	1.0	8	0.1																																												
Beryllium EPA 6010	_	0.75	75	0.1																								-																				
Barlum EPA 6010		100	10000	-	120	8	110	92	150	06	140	120	160	190	140	130	130	150	8	160	110	130	140	130	120	110	120	84	180	110	130	130	120	45	63	110	11	9	82	120	100	110	100	170	86	95	120	120
Arsenic EPA 6010	(mg/kg)	5.0	200	-																																		-										
Antimony EPA 6010	(mg/kg)	15	200	2.0																																												
Sample	_	STLC Limits (mg/l)	s (mg/kg)	it (mg/kg)	-	4	10	-	4	10	4	10	-	4	10	+	4	2	-	4	9	٢	4	2	+	4	10	1	4	10	2.0	5.0	9.0	19.0	29.0	39.0	49.0	-	4	10	-	4	10	4	10	-	4	10
Sample	l.D.	STLC Lin	TTLC Limits (mg/kg)	Detection Limit (mg/kg)	288-2-3-1	28B-2-3-4	2BB-2-3-10	2BB-2-4-1	28B-2-4-4	2BB-2-4-10	288-2-5-4	2BB-2-5-10	288-2-6-1	2BB-2-6-4	2BB-2-6-10	2BB-2-7-1	2BB-2-7-4	2BB-2-7-10	2BB-2-8-1	288-2-8-4	2BB-2-8-10	2BB-2-9-1	2BB-2-9-4	2BB-2-9-10	2BB-2-10-1	2BB-2-10-4	2BB-2-10-10	2BB-2-11A-1	2BB-2-11A-4	2BB-2-11A-10	2BB-2-11B-2.0	2BB-2-11B-5.0	2BB-2-11B-9.0	2BB-2-11B-19.0	2BB-2-11B-29.0	2BB-2-11B-39.0	2BB-2-11B-49.0	288-2-12-1	2BB-2-12-4	2BB-2-12-10	2BB-2-13-1	2BB-2-13-4	2BB-2-13-10	288-2-14-4	2BB-2-14-10	2BB-2-15-1	288-2-15-4	2BB-2-15-10
	Area			ſ	T	T			2	2	2 2	2 2	2 2		2 2	2 2	2 2		Г	Γ	Γ	Γ	Γ	Γ	Γ		2 2	2 2	2 2	2 2	2 2	T	2 2	2 2	2	2 2	2	2	2 2	2 2	2 2	2 28	2 26	2 21	2 21	Т	2 28	2 28

TABLE 6
CHEMICAL ANALYTICAL RESULTS: TITLE 22 METALS
Boeing Realty Corporation, C-6 Facility
Los Angeles, California

4	EDA 6040 E	EDA GOTO E	EDA GOTO EDA	EDA 6040 E	CDA 6040	CDA 1406	0700 100	2000										3
					(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	EPA 6010 (mg/kg)	(mg/kg)	EPA 6010 (ma/ka)	(ma/ka)	EPA 6010 (ma/ka)	(ma/ka) (m	EPA 6010	EPA 6010	EPA 6010
I	2	5.0	100	2	1.0		999	_	25	5.0	0.2			10	50	5	24	(mg/kg)
TTLC Limits (mg/kg)	200	200	10000	75	8	200	2500	8	2500	1000	20	3500	2000	. 8	200	200	2400	2000
Detection Limit (mg/kg)	5.0	1.0	0.1	0.1	0.1	0.5	0.05		0.1	1.0	0.01				0.1		0.5	0
-			130				24		31	23			13				8	
4			120				24	8.9	13				-23				28	37
10			110				23		12				5				38	
-			71				17		7.1				9.5				20	
4			140				25		14				17				2 5	
10			26				23		13				12				3 8	
-			110				22		13				2				3 8	
4			7.1				24		14				1 5	1			3 5	
10		1	120				31		19				ž ¢				77	4 6
-			120				13		+				¥ ;			1	8 8	اعا
4		r	130				34						-				2	29
ę			120				5 8		*				<u> </u>	1			37	4
2 -			2 6				07	l	2				+				53	4
-		1	081				28	ĺ	15				16				32	90
4	1	1	140				18		9.4				11				24	27
5			120				26		16				13				8	45
F	6.		140				29		13				15				78	
4		_	120				29		18				15				33	
10			84				21		10				9.2				7	
15			7.7				48	1.4	8.4				7.1				, 2	
20			29	- 1			13		1.8				4.0		T		7	
25			31				11		1.9				6				Ę.	
-			98				19		9				12			10.1	38	\ ``
4			150				33		18				92				8	
10		1, **	130				33		8				15		\dagger		37	1 6
50			32				13		2.7				2.05				2 4	
52			29				19	2.4	3.8				82	l	†		2 4	
1			120				27		20				5			<u> </u>	2 2	
4			85				78		15				14				5 5	T
10			110				25		19				7	T			3 8	
-	_	-	120				33		15				9	1			9 7	
4			120				28	8	15				2 4				3 8	Ϊ.
10			130				72		15				1 4	1			3 2	Ϊ`
-			110				27		1				9	l			5 g	7 7
4			110				4	١	12				12		+		3 8	7 8
10			140				3.0		88				1 5			\dagger	/7	8 3
-			120	1			8		15				2 4		T		8 8	
4		-	130				28		15				14		\dagger	$\frac{1}{1}$	25 62	7
9		-	110				28		17				7		T		3 8	
1			100				19	İ	F	8.6			5		\dagger		3 0	4
4			120				20		12	2.7			=				24	43
9			110				21	7.2	13				12				22	33
-			120				21	7.3	9.6				12				22	8
4			130				30	**										
•					1		107	0.0				_	4	_	_		8	4

Shaded cell indicates constituent result was below the detection limit.

TABLE 6 CHEMICAL ANALYTICAL RESULTS: TITLE 22 METALS

Boeing Realty Corporation, C-6 Facility Los Angeles, California

Zinc	(mg/kg)	250	2000	0.1	53	32	28	31	4	45	28	17	19	46	39	57	2	18	2	3,4	4	\$	4	2 3	2 6	25	S	25	33	24	92	14	46	31	17	56	27	88	59	40	30	16	8	44	110	45	S	23]
_	(mg/kg)	24	2400	0.5	31	21	26	25	33	32	22	15	=	31	25	3	12	12	13	12	27	3	2 8	13	1	26	31	8	19	13	13	8	8	22	12	20	8	25	32	31	23	4	18	43	23	35	24	19	
Thallium	(mg/kg)	7.0	700	5.0															l																														
Silver	(mg/kg)	5.0	200	0.1																																													
Selenium	(mg/kg)	1.0	100	1.0																				Ì																									
Nickel	(mg/kg)	20	2000	0.5	12	-	8.7	4	14	13	8.7	5.4	5.0	19	13	4	4.4	7.5	3.6	8.8	16	9	Ξ	5.6	5.1	12	19	13	8.6	5.8	4.7	Ξ	15	9	7.4	8.5	8.2	13	15	4	7.7	5.4	6.9	13	=	15	9	8.8	
Molybdenum	(mg/kg)	350	3500	0.5																																								5 . - :					
Mercury	(mg/kg)	0.2	2	0.01																																													
Lead		5.0	0001	1.0																																								-		8.1			
Copper	(mg/kg)	l	2500	0.1	15	9	+	=	14	16	10	1.0	2.9	17	13	19	5.6	2.7	2.4	8.8	12	13	15	4.8	1.8	16	171	17	11	5.1	1.6	14	18	12	2.7	7.5	8.5	- 17	21	22	15	2.9	7.2	19	13	18	15	9.4	
Cobalt	(mg/kg)	80	8000	0.5	9.1		4.6	7.3	7.8	7.6	4.8	2.0	2.5	Ŧ	7.7	8.2	2.0	2.5	1.7	6.6	6.9	6.1	6.3	2.4	2.7	8.4	8.0	7.8	6.1	2.4	1.9	5.7	7.8	4.1	4.5	5.1	4.5	9.5	8.5	8.0	6.3	2.3	4.4	7.2	8.4	8.5	6.1	4.0	
Chromium Tot.	(mg/kg)	980	2500	0.05	24	19	18	26	26	27	18	14	11	33	23	29	++	13	1	18	28	23	8	12	12	28	32	30	11	12	10	25	25.	22	9.3	17	17	25	31	31	13	Ŧ	12	31	15	22	19	14	
Chromium VI	(mg/kg)	5.0	200	0.5																																													
Cadmium FPA 6010	(mg/kg)	1.0	8	-0																																													
Beryllium FPA 6010	-	0.75	75	0																																					-,							3.1	
Barium FPA 6010	(mg/kg)	91	10000	-	76 66	27	8	40	140	130	71	25	29	160	180	120	47	43	22	85	120	110	110	48	29	180	160	110	83	47	21	66	100	79	28	28	93	66	89	99	83	29	23	89	95	130	100	70	ŧ
Arsenic FPA 6010				0										5																																			detection lin
Antimony FPA 6010	(mg/kg)	15	200	5.0																																													as below the
Sample	(ft. bgs)	STLC Limits (mg/l)	TTLC Limits (mg/kg)	nit (mg/kg)		4 5	ę i		7	9	15	20	25	-	4	10	15	20	25	-	4	9	15	20	25	1	4	₽	5	8	25	4	5	20	8	40	S	-	4	10	20	08	04	90	-	4	10	20	nent result w
Semole	l.D.	STLCLi	TTCLIM	Detection Limit (mg/kg)	288-2-30-1	ZDD-Z-30-4	288-2-30-10	ZBB-2-31-1	2BB-2-31-4	2BB-2-31-10	2BB-2-31-15	2BB-2-31-20	2BB-2-31-25	2BB-2-32-1	2BB-2-32-4	2BB-2-32-10	2BB-2-32-15	2BB-2-32-20	288-2-32-25	2BB-2-33-1	288-2-33-4	2BB-2-33-10	2BB-2-33-15	2BB-2-33-20	2BB-2-33-25	2BB-2-34-1	2BB-2-34-4	288-2-34-10	2BB-2-34-15	2BB-2-34-20	2BB-2-34-25	2BB-6-1-4	2BB-6-1-10	288-6-1-20	2BB-6-1-30	2BB-6-1-40	2BB-6-1-50	28B-6-2-1	2BB-6-2-4	2BB-6-2-10	2BB-6-2-20	2BB-6-2-30	2BB-6-2-40	2BB-6-2-50	2BB-6-3-1	2BB-6-3-4	2BB-6-3-10	2BB-6-3-20	Shaded cell indicates constituent result was below the detection limit
	Area			Γ	,	T	Т	Т					2		2	2	2	2	2	2		2			2	2							٦	Ī	Т			9	9	9	9	6	9	9	9	9	9	9	Shaded

Shaded cell indicates constituent result was below the detection limit.

TABLE 6
CHEMICAL ANALYTICAL RESULTS: TITLE 22 METALS

		Sample	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium VI	Chromium Tot.	Cobatt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
į	Sample		EPA 6010	EPA 6010	EPA 6010 EPA 6010	_	EPA 6010	EPA 7196	EPA 6010	EPA 6010	EPA 6010	$\overline{}$	EPA 7471	EPA 6010	EPA 6010	EPA 6010		_		EPA 6010
Area	I:D.	(ft. bgs)	(mg/kg)) B)B	ĝ	₩ Y	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
	STLC Limits (mg/l)	its (mg/l)	15	5.0		•		5.0	999	80	25	5.0	0.2	350	20	1.0	5.0	7.0	24	250
	Detection Limit (ma/kg)	(mg/kg)	30 20 30		0.1	0.1	3 6	200	2500			<u>6</u> -	2 5	3500	2000	<u>§</u> ;	200	200	2400	2000
ω	288-6-3-30	8							1-	2.3	1.9	2	5	2	0. 4	2	o i	0.0	6.0	10.1
g	2BB-6-3-40	40			53				25						12				2	8
ဖ	2BB-6-3-50	90			36				17						0.6				6	29
ထ	2BB-6-4-4	4			140				24						4				29	42
ဖ	2BB-6-4-10	10			97				28		16				12				29	4
9	2BB-6-4-20	20	: "		48				14						6.9				4	20
9	2BB-6-4-30	30			20				12						5.6				7	9
ဖ	2BB-6-4-40	40			19				10						6.5				2	2
ဖ	2BB-6-4-55	55			11				10						4.0				7.0	0
ဖ	288-6-5-1.5	1.5			130				26						12				2 0	5
မ	2BB-6-5-5.0	5			160				28						1			1	2 8	7 5
؈	288-6-5-9.0	6			110				24						\$				2 0	2 5
9	2BB-6-5-19.0	19			120				44						2 4		ľ		3 8	7 3
စ	2BB-6-5-29.0	29			25				ă,		8				1				3 5	8
۳	288-6-39 O	ę			27				2		2 9				3, 1				<u>e</u> :	77
, .	200000000000000000000000000000000000000	3 5			17				6		0.0				١٩				2	9
٥	788-0-2-48.0	20			8				25		8.0				Ξ				19	26
9	2BB-6-6-2.0	2			<u>ş</u>				25	8.8	12				=				24	34
9	2BB-6-6-5.0	9			150				35		8				17				36	49
ဖ	2BB-6-6-10.0	5			130				30		19			200	15				æ	53
٥	2BB-6-6-19.0	19			89				29		8.8				11				98	32
စ	2BB-6-6-29.0	29			20				12	2.7	4.0				6.0				13	18
ø	2BB-6-6-39.0	39			43				27		12				12				26	35
9	2BB-6-6-50.5	50.5			19				1	1.2	1.5				3.2				6.4	5.8
9	288-6-8-1	F			93				28		11				=				98	35
9	2BB-6-8-4	4			130				21		12				Ξ				23	38
ထ	2BB-6-8-10	5			140				26	7.0	14				12				24	45
9	2BB-6-8-15	15			110				25		8				4				33	52
9	2BB-6-8-20	20			81				20		13				-				22	59
9	288-6-8-25	25			24				11		3.6				6.1		Sampi P		16	15
9	2BB-6-9-1	-			73				25		10				13				30	36
9	2BB-6-9-4	4			130				18	6.5	8.9				8.3				24	28
9	2BB-6-9-10	9			83				33		20				13				35	46
9	28B-6-9-15	15			100				22		13				10				24	39
9	2BB-6-9-20	20			75				22		=				7.9				26	31
ဖ	2BB-6-9-25	25			37				16		3.3	. 4	_		4.9				16	17
۵	2BB-6-10-1	-			91				21		11				11				27	33
9	2BB-6-10-4	4			120				33	-	11				13				30	14
9	2BB-6-10-10	5			क्र				22		14				11		-		24	99
9	2BB-6-10-15	15			150				33		20				16				40	89
9	2BB-6-10-20	20			8				21		8.5				9.3				25	27
ထ	2BB-6-10-25	52			33				1		2.8				4.3				14	18
9	2BB-6-11A-1	-			8				22	8.4	121				11				28	35
9	2BB-6-11A-4	4			130				29		Ξ				14				31	39
٥	2BB-6-11A-10	9			120				30	7.8	17				13				30	45
Shade	Shaded cell indicates constituent result was below the detection limit.	int result w	as below the	3 detection li	mit.															

TABLE 6 CHEMICAL ANALYTICAL RESULTS: TITLE 22 METALS

Boeing Realty Corporation, C-6 Facility Los Angeles, California

_	Samole	4	FPA 6010	FPA 6010 FPA 6010	FPA 6010	FPA 6010	FDA 6010	FDA 7106	EDA ento	EDA 6010	COA COAD	CDA 6040	EDA 7474	0,000	000				Variation	7
Area	i.D.	(ft. bgs)	(mg/kg)	_			_		(mg/kg)	(mg/kg)			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
	STCLI	STLC Limits (mg/l)	15					_		L	25	5.0	0.2	350		1.0			24	250
	TTLC Lim	TTLC Limits (mg/kg)	200		5	75	5	200	2500		2500	1000	20	3500	2	100	200	00/	2400	2000
	Detection Limit (mg/kg)	nit (mg/kg)	5.0	1.0							0.1	1.0	0.01	0.5					0.5	0.1
9	28B-6-11B-15	15			120				38		21				14				37	36
9	2BB-6-11B-20	20			84				41	3.7	9.4				7.6				21	26
9	288-6-118-25	25			36	•			20		8.7				7.3				8	28
9	2BB-6-12-1	-			8				21		8.5				F				24	3 8
9	28B-6-12-4	4			130				27		F				14				3, 4,	\$ 6
۰	2BB-6-12-10	5			140				34	7.9	18				Ą				3 8	
80	288-6-12-15	15			140				ac		2 0				2 5				१ :	\$;
,	200 21 2000	2 6			2 2				07						2				34	51
٦	77-71-0-027	3			2				8		4				12				24	40
	2BB-6-12-25	25			₩.				18		6.0				8.4				20	27
9	2BB-6-13-1	1			120				25	7.0	9.1				12				33	31
9	2BB-6-13-4	4			120)			20	7.3	8.8				7				98	37
9	2BB-6-13-10	10			54				18		7.8				9.4				2	2
9	288-6-13-15	15			120				27	8.8	192				14				3 2	5 5
٥	2BB-6-13-20	20			88				181		6.1				8.5				3 4	5 5
	28B-6-13-25	25			22				9		0.85				4				2 6	1 3
Γ	288-6-14-1	-			83				8		o				2 5				6	18
	2BB-6-14-4	4			1 5				24		4				2 5				67	9 5
Γ	28B-8-14-10	5			8				96		7				2 5				5 8	9
	28B-6-14-15	ž,			140				2 2		2 6				2 ;				32	46
Т	200 8 14 24	2 5			- "				67		3 3				4				35	22
Τ	12417000	, ,									5.5			ł	4.4				15	9
T	788-0-14-73	72			*				15		2.8				5.2				18	20
	288-6-15-1	-			130				27		2				15				26	35
	288-6-15-4	4			792				18		15				13				24	44
g	2BB-6-15-10	5			92				32		20				16				34	55
9	2BB-6-15-15	15			120				33	9.1	20				16				37	19
9	2BB-6-15-20	20		1t	110				33	0.7	19				12				33	72
9	2BB-6-15-25	25			84				22	4.9	11				=				25	3.
8	288-6-16-1	-			79				22	7.7	9.4				12				27	8
6	2BB-6-16-4	4			200				20		8.5				±				29	32
9	2BB-6-16-10	10			140				37	0.6	18				16				8	63
9	288-6-16-15	15			120				34	8.2	16				15				35	8
9	2BB-6-16-20	20			110				19		41				12				25	38
9	2BB-6-16-25	25			69				18	6.3	7.7				9.0				24	27
9	2BB-6-17-2.0	2		1	150				32	8.1	12				17				35	38
9	2BB-6-17-5.0	5			150				37	8.8	23				17				98	52
ဖ	2BB-6-17-9.0	6			130				33		-11				14				37	53
ဖ	2BB-6-17-19.0	19			100				30	7.7	20				16				æ	48
	2BB-6-17-29.0	29			19				8.6	1.9	1.5				3.9				8.7	13
	2BB-6-17-39.0	39			16				9.2		4.2				4.6				5	15
9	288-6-17-49.0	49			ď				76		•					ĺ				

Shaded cell indicates constituent result was below the detection limit

Shaded cell indicates constituent result was below the detection limit.

Boeing Realty Corporation, C-6 Facility Los Angeles, California

Area	Sample ID	Depth (ft bgs)	PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260
	Detection Li	mit (ug/kg)	20	20	20	20	20	20	20
2	2BB-2-1-1	1							
2	2BB-2-1-4	4							
2	2BB-2-1-10	10							
2	2BB-2-2-1	1							
2	2BB-2-2-4	4							
2	2BB-2-2-10	10							
2	2BB-2-11B-2.0	2							
2	2BB-2-11B-5.0	5							
2	2BB-2-11B-9.0	9							
2	2BB-2-11B-19.0	19							
2	2BB-2-11B-29.0	29							
2	2BB-2-11B-39.0	39							
2	2BB-2-11B-49.0	49							
2	2BB-2-22-1	1							
2	2BB-2-22-4	4							
2	2BB-2-22-10	10							
2	2BB-2-22-15	15							
2	2BB-2-22-20	20							
2	2BB-2-22-25	25							
2	2BB-2-23-4	4							
2	2BB-2-23-1	1							
2	2BB-2-23-10	10				200 mm	H		
2	2BB-2-23-15	15							
2	2BB-2-23-20	20							
2	2BB-2-23-25	25							
2	2BB-2-24-1	1							
2	2BB-2-24-4	4							
2	2BB-2-24-10	10							. 1
2	2BB-2-31-1	1							
2	2BB-2-31-4	4							
2	2BB-2-31-10	10						1,500	
2	2BB-2-31-15	15							
2	2BB-2-31-20	20							
2	2BB-2-31-25	25							
2	2BB-2-32-1	1			- 2 7 7 7 7				
2	2BB-2-32-4	4							; "-
2	2BB-2-32-10	10							
2	2BB-2-32-15	15			:				
2	2BB-2-32-20	20							
2	2BB-2-32-25	25		::					

Shaded cell indicates constituent result was below the detection limit. BRC C-6 2BB Study 97400200.007\TABLE7.XLS

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Boeing Realty Corporation, C-6 Facility Los Angeles, California

Area	Sample ID	Depth (ft	PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260
6	2BB-6-1-4	4							
6	2BB-6-1-10	10							
6	2BB-6-1-20	20							
6	2BB-6-1-30	30							
6	2BB-6-1-40	40							
6	2BB-6-1-50	50							
6	2BB-6-2-1	1							
6	2BB-6-2-4	4							
6	2BB-6-2-10	10							
6	2BB-6-2-20	20							
6	2BB-6-2-30	30							
6	2BB-6-2-40	40							
6	2BB-6-2-50	50							
6	2BB-6-3-1	1							
6	2BB-6-3-4	4							
6	2BB-6-3-10	10							
6	2BB-6-3-20	20						701-10-41	
6	2BB-6-3-30	30							
6	2BB-6-3-40	40							
6	2BB-6-3-50	50							
6	2BB-6-4-4	4							
6	2BB-6-4-10	10							
6	2BB-6-4-20	20							
6	2BB-6-4-30	30							
6	2BB-6-4-40	40							
6	2BB-6-4-55	55							
6	2BB-6-5-1.5	1.5							
6	2BB-6-5-5.0	5							
6	2BB-6-5-9.0	9							
6	2BB-6-5-19.0	19							
6	2BB-6-5-29.0	29							
6	2BB-6-5-39.0	39							
6	2BB-6-5-49.0	49							
6	2BB-6-6-2.0	2							
6	2BB-6-6-5.0	5							
6	2BB-6-6-10.0	10		11					
6	2BB-6-6-19.0	19							
6	2BB-6-6-29.0	29				a i			
6	2BB-6-6-39.0	39							
6	2BB-6-6-50.5	50.5		P 21				-	
6	2BB-6-9-1	1							-

Shaded cell indicates constituent result was below the detection limit. BRC C-6 2BB Study 97400200.007\TABLE7.XLS

Boeing Realty Corporation, C-6 Facility Los Angeles, California

Area	Sample ID	Depth (ft bgs)	PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260
6	2BB-6-9-4	4							
6	2BB-6-9-10	10							
6	2BB-6-9-15	15							
6	2BB-6-9-20	20					1000		
6	2BB-6-9-25	25							
6	2BB-6-10-1	1							
6	2BB-6-10-4	4							
6	2BB-6-10-10	10							
6	2BB-6-10-15	15							
6	2BB-6-10-20	20							
6	2BB-6-10-25	25							
6	2BB-6-11A-1	1.							
6	2BB-6-11A-4	4							
6	2BB-6-11A-10	10							
6	2BB-6-11B-15	15							
6	2BB-6-11B-20	20							- 1,
6	2BB-6-11B-25	25		- 7::::::::::::::::::::::::::::::::::::					
6	2BB-6-12-1	1		7 200 300					
6	2BB-6-12-4	4							
6	2BB-6-12-10	10							
6	2BB-6-12-15	15							
6	2BB-6-12-20	20							
6	2BB-6-12-25	25							
6	2BB-6-13-1	1							
6	2BB-6-13-4	4							
6	2BB-6-13-10	10							
6	2BB-6-13-15	15							
6	2BB-6-13-20	20							
6	2BB-6-13-25	25							
6	2BB-6-14-1	1		eriye i					
6	2BB-6-14-4	4	-						
6	2BB-6-14-10	10	u.*				******		1 100
6	2BB-6-14-15	15							
6	2BB-6-14-21	21							
6	2BB-6-14-25	25							
6	2BB-6-15-1	1		7.7					:
6	2BB-6-15-4	4							
6	2BB-6-15-10	10							
6	2BB-6-15-15	15							
6	2BB-6-15-20	20	7						
6	2BB-6-15-25	25							

Shaded cell indicates constituent result was below the detection limit. BRC C-6 2BB Study 97400200.007\TABLE7.XLS

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Boeing Realty Corporation, C-6 Facility Los Angeles, California

Area	Sample ID	Depth (ft bgs)	PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260
6	2BB-6-16-1	1	ang.						
6	2BB-6-16-4	4		14					
6	2BB-6-16-10	10		1					
6	2BB-6-16-15	15							
6	2BB-6-16-20	20							
6	2BB-6-16-25	25	- 14						
6	2BB-6-17-2.0	2							
6	2BB-6-17-5.0	5							
6	2BB-6-17-9.0	9				A. Let.			
6	2BB-6-17-19.0	19		41					
6	2BB-6-17-29.0	29							
6	2BB-6-17-39.0	39						:	
6	2BB-6-17-49.0	49							

Shaded cell indicates constituent result was below the detection limit

TABLE 8
CHEMICAL ANALYTICAL RESULTS: PESTICIDES
(EPA Method 8080)

Boeing Realty Corporation, C-6 Facility Los Angeles, California

	35.0			F		Π		Τ	Γ	ŀ	•	Π	<u> </u>
Toxaphene				-	-	<u> </u>	-	_	L		_		\vdash
Меthохусhlor													
Heptachlor epoxide	1.0												
Heptachlor	1.0												
Endrin aldehyde	3.0												
Endrin	2.0				1-, 1								
Endosulfan sulfate	10.0												
Endosulfan II	1.0												
l nailusobn∃ 	2.0												
	1.0												
Dieldrin	2.0												
†4DDT	1.0												
¢'tDDE								1527-1127					
4°4,-DDD	0.2												
Chlordane	10.0												
(Lindane)	1.0												
DH8-stleb	2.0												
DHG-Eta-BHC	1.0												
alpha-BHC	1.0												
ninblA	1.0												
	/kg)	-	4	10	15	20	25	1	4	10	15	20	25
Depth (ft bgs)	Detection Limit (ug/kg)												
۵	tion Lit												
Sample ID	Detec	33-1	33-4	33-10	33-15	33-20	33-25	35-1	35-4	35-10	35-15	35-20	35-25
Sal		2BB-2-33-1	2BB-2-33-4	2BB-2-33-10	2BB-2-33-15	2BB-2-33-20	2BB-2-33-25	2BB-2-35-1	2BB-2-35-4	2BB-2-35-10	2BB-2-35-15	2BB-2-35-20	2BB-2-35-25
1				,	``	,,		Ľ	```	<u>``</u>	,,		/``
Area													

Shaded cell indicates constituent result was below the detection limit

TABLE 9 SUMMARY OF RESULTS OF QA/QC ANALYSIS FOR VOLATILE ORGANIC COMPOUNDS (EPA Method 8260)

Boeing Realty Corporation, C-6 Facility Los Angeles, California

Sample Number	Date Sampled	Onsite Laboratory	Station	ary Labora	itory
		(μg/kg)	 	(μg/kg)	
		TCE	PCE	Toluene	TCE
Detection Limit		5.0	2.5	2.5	2.5
2BB-2-26-1	4/10/97	<u> </u>	4		
2BB-2-23-4	4/10/97				
2BB-2-22-1	4/11/97				
2BB-2-31-20	4/11/97	1			
2BB-2-33-10	4/11/97				
2BB-2-35-4	4/14/97			a Salah Lind	
2BB-2-1-10	4/14/97	lan ann an an an an an an an an an an an			
2BB-2-4-4	4/14/97				
2BB-2-3-10	4/14/97		11.4		
2BB-2-12-1	4/15/97				
2BB-2-15-10	4/15/97		and the		
2BB-6-8-1	4/16/97				
2BB-6-10-20	4/17/97				A
2BB-6-14-1	4/17/97				
2BB-6-15-20	4/18/97				
2BB-6-16-15	4/18/97				
2BB-6-6-5	4/24/97	14000 C.C			
2BB-6-17-39.5	4/24/97		ABOVE SET SE		
2BB-6-1-10	4/23/97	14 24 14 12 12 12 12 12 12 12 12 12 12 12 12 12			
2B8-6-1-20	4/23/97				
2BB-6-1-30	4/23/97				
2BB-6-1-4	4/23/97				
2BB-6-1-40	4/23/97	15			
2BB-6-1-50	4/23/97	52			
2BB-6-2-1	4/23/97	32	16		19
2BB-6-2-4	4/23/97	9.6	16		19
2BB-6-2-10	4/23/97	9.6			
2BB-6-2-20 2BB-6-2-30	4/23/97	9.1			
					V
2BB-6-2-40	4/23/97	16			
2BB-6-2-50	4/23/97	19		3	
2BB-6-3-1	4/23/97	23		3.3	15
2BB-6-3-4	4/23/97				
2BB-6-3-10	4/23/97	13			
2BB-6-3-20	4/23/97	5.9			
2BB-6-3-30	4/23/97				
2BB-6-3-40	4/23/97	34			
2BB-6-3-50	4/23/97	6.2			
2BB-6-4-4	4/23/97	17			
2BB-6-4-10	4/23/97	33			
2BB-6-4-20	4/23/97	16			
2BB-6-4-30	4/23/97	34			
2BB-6-4-40	4/23/97	15			
2BB-6-4-55	4/23/97	13			

LEGEND:

TCE - Trichloroethene

PCE - Tetrachloroethene

Shaded cell indicates constituent result was below detection limit.

Table shows only constituents that had at least one detection in the above samples.

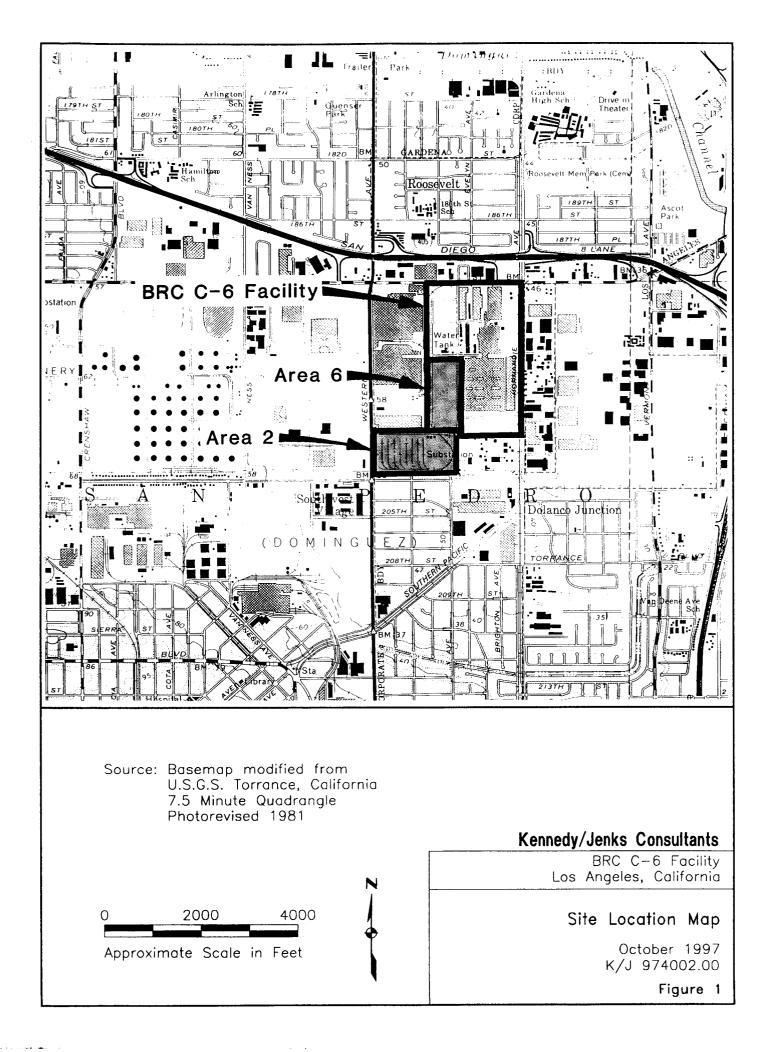
TABLE 10 SUMMARY OF RESULTS OF QA/QC ANALYSIS FOR TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA Method 418.1)

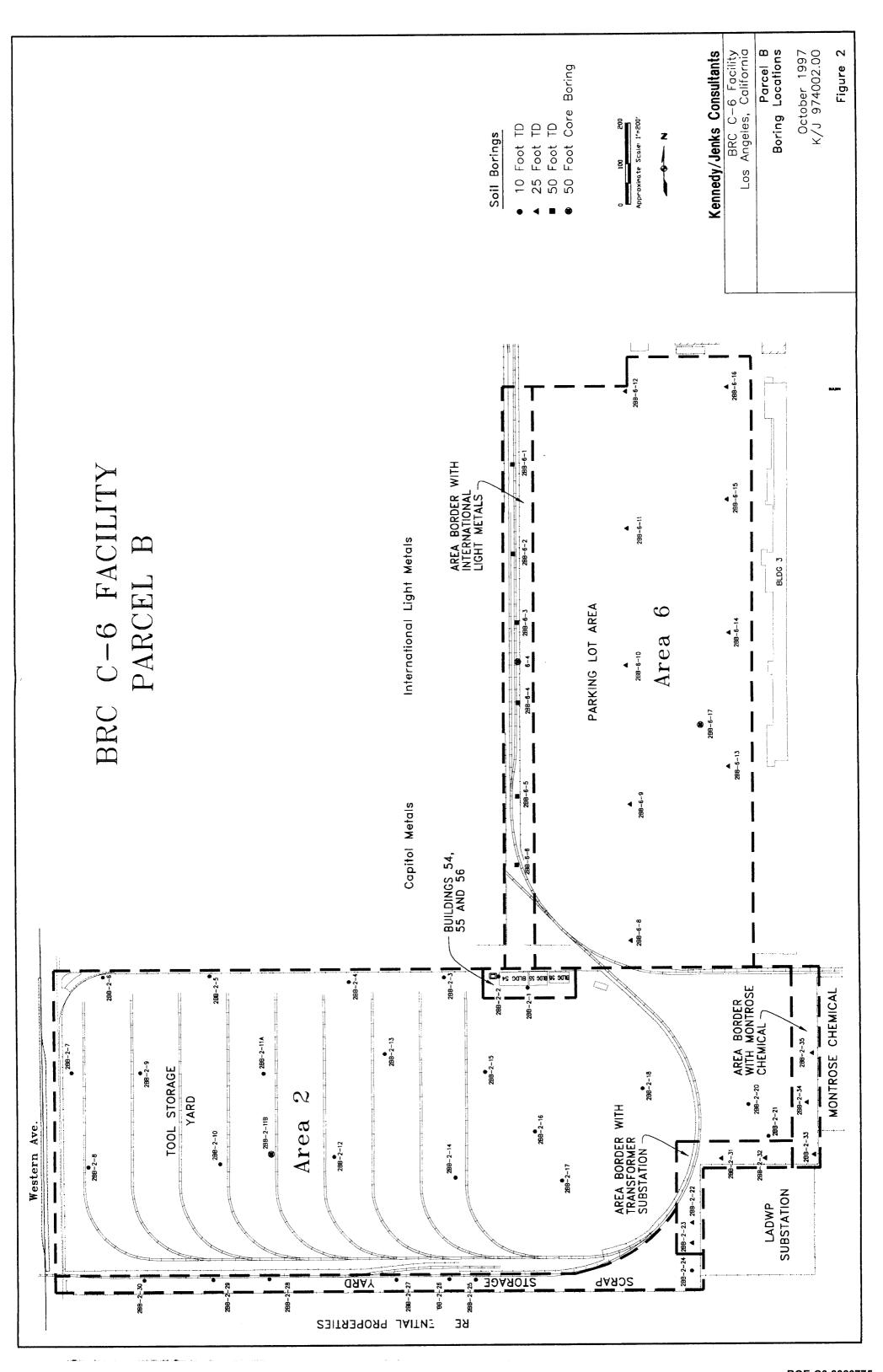
Boeing Realty Corporation, C-6 Facility Los Angeles, California

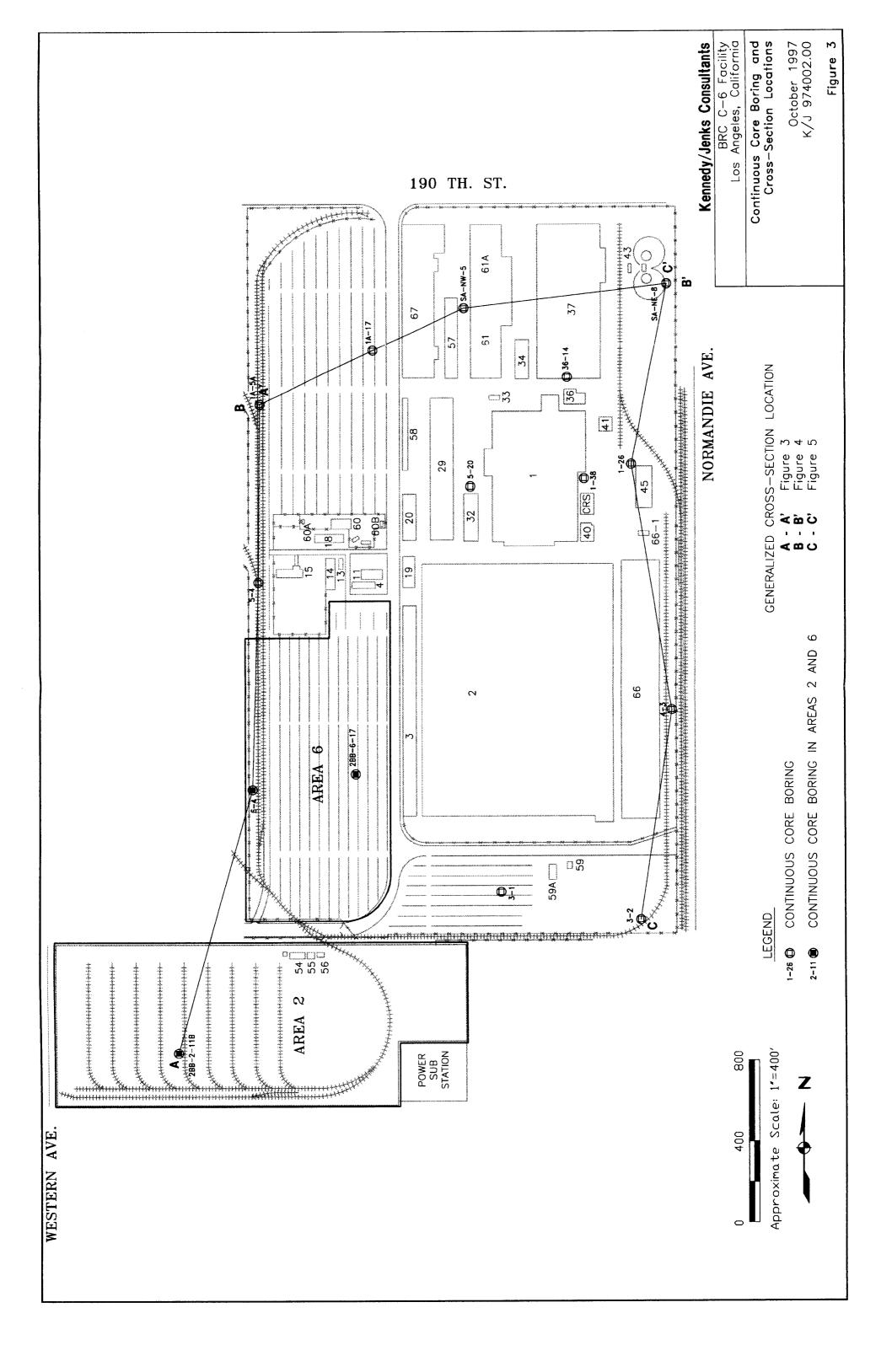
		Labor	atory Resu	ılts (mg/kg)
Sample No.	Date Sampled	On	site	Stationary
Detection Limit	<u> </u>	20	10	8
2BB-2-29-10	4/10/97			7.49945
2BB-2-23-25	4/10/97			e and the
2BB-2-22-25	4/11/97			9
2BB-2-33-1	4/11/97			26
2BB-2-34-25	4/11/97			10
2BB-2-6-1	4/14/97			19
2BB-2-9-1	4/15/97			21
2BB-2-18-10	4/15/97			14
2BB-6-13-20	4/17/97			
2BB-6-15-20	4/18/97			
2BB-6-3-20	4/23/97			
2BB-6-4-20	4/23/97			
2BB-6-5-19	4/24/97			57
2BB-6-6-19	4/24/97		a company	73
2BB-6-17-49	4/24/97			
2BB-6-1-4	4/23/97			
2BB-6-1-10	4/23/97			
2BB-6-1-20	4/23/97			
2BB-6-1-30	4/23/97			15
2BB-6-1-40	4/23/97			10
2BB-6-1-50	4/23/97			10
2BB-6-2-1	4/23/97			
2BB-6-2-4	4/23/97			
28B-6-2-10	4/23/97	41		13
2BB-6-2-20	4/23/97			19
2BB-6-2-30	4/23/97			13
2BB-6-2-40	4/23/97			11
2BB-6-2-50	4/23/97			16
2BB-6-3-1	4/23/97			
2BB-6-3-4	4/23/97			
2BB-6-3-10	4/23/97			
2BB-6-3-20	4/23/97			
2BB-6-3-30	4/23/97			48
2BB-6-3-40	4/23/97			15
2BB-6-3-50	4/23/97			
2BB-6-4-4	4/23/97			
2BB-6-4-10	4/23/97			19
2BB-6-4-20	4/23/97			20
2BB-6-4-30	4/23/97			. Tab.
2BB-6-4-40	4/23/97			35
2BB-6-4-55	4/23/97			

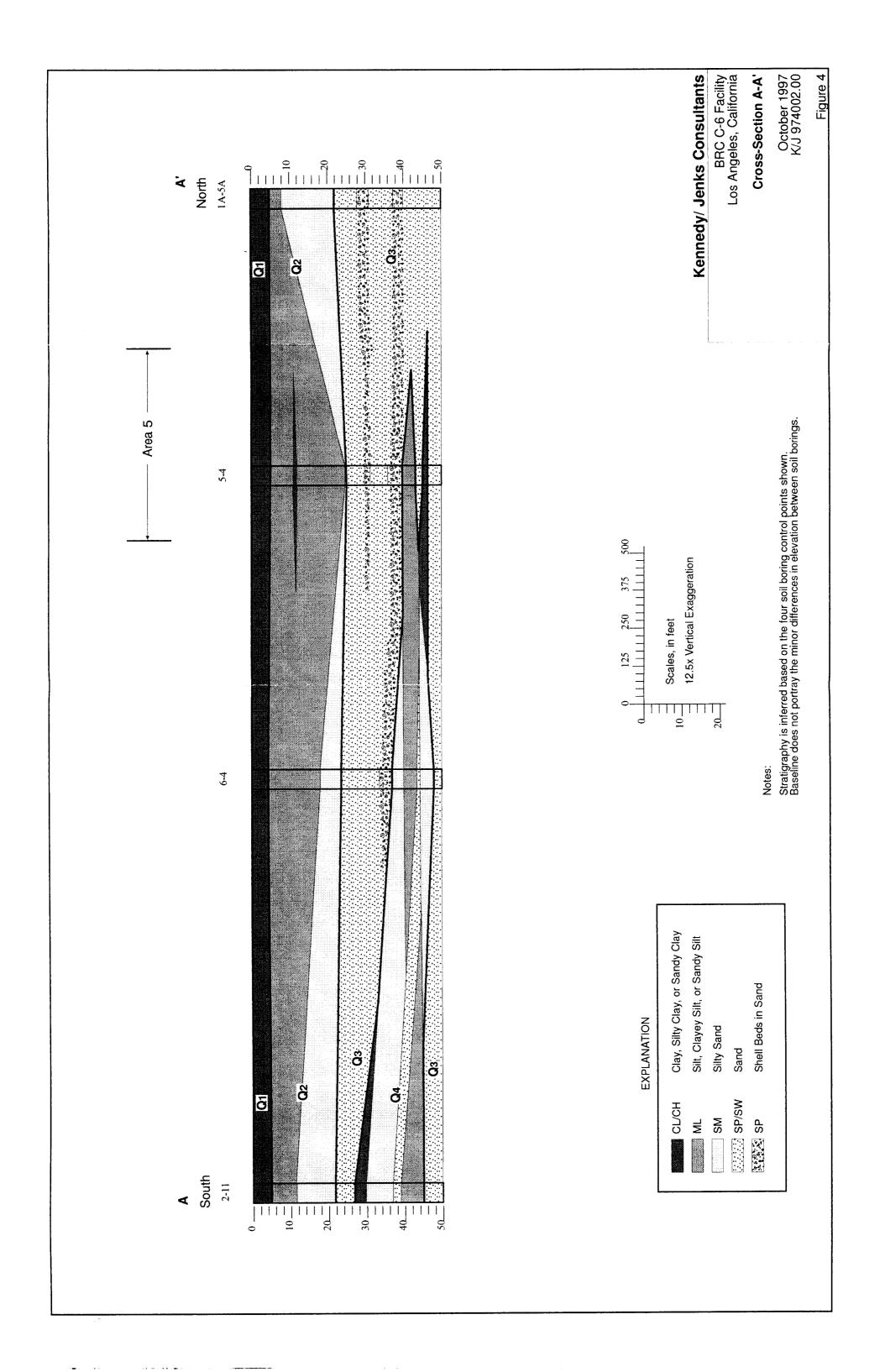
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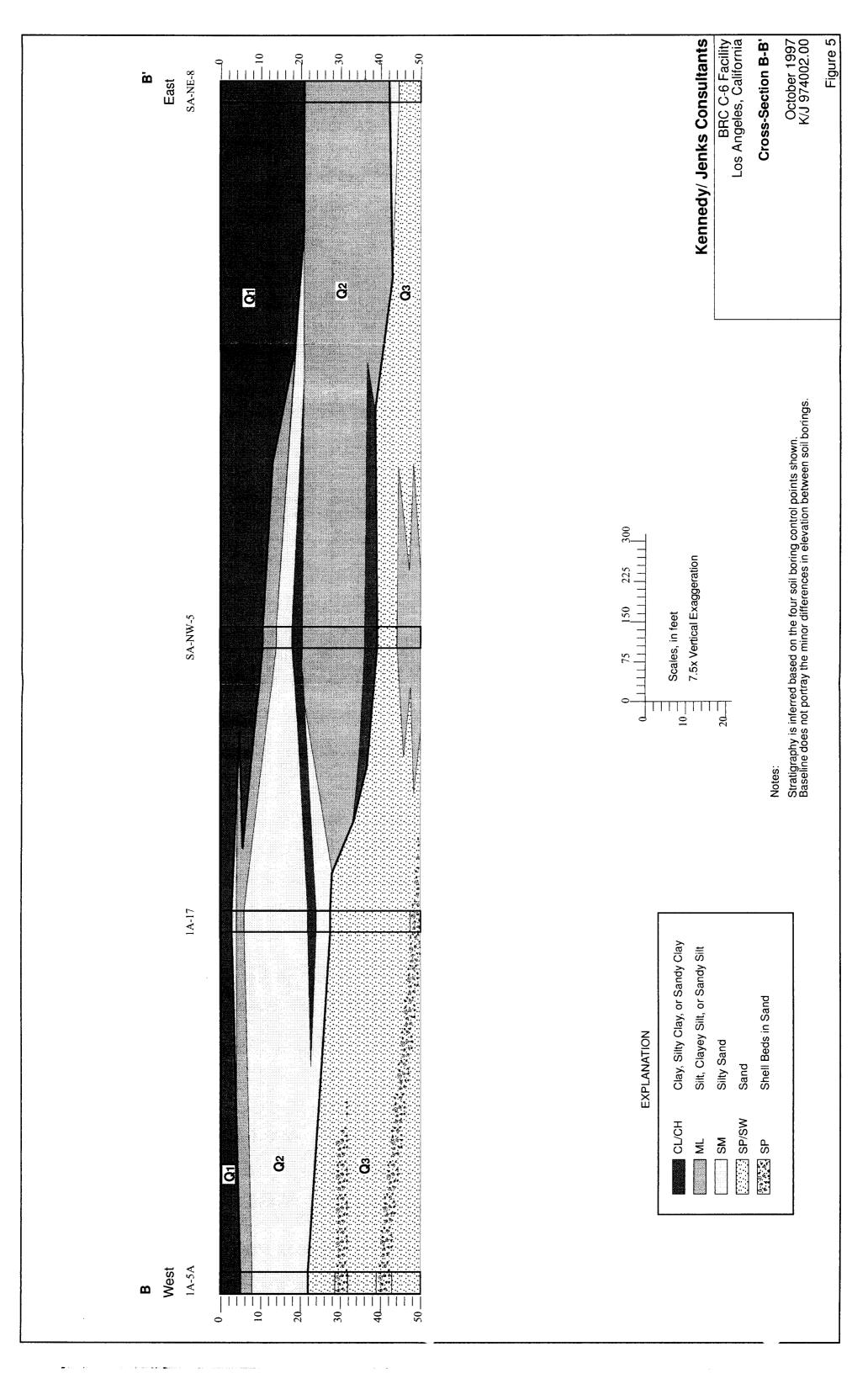
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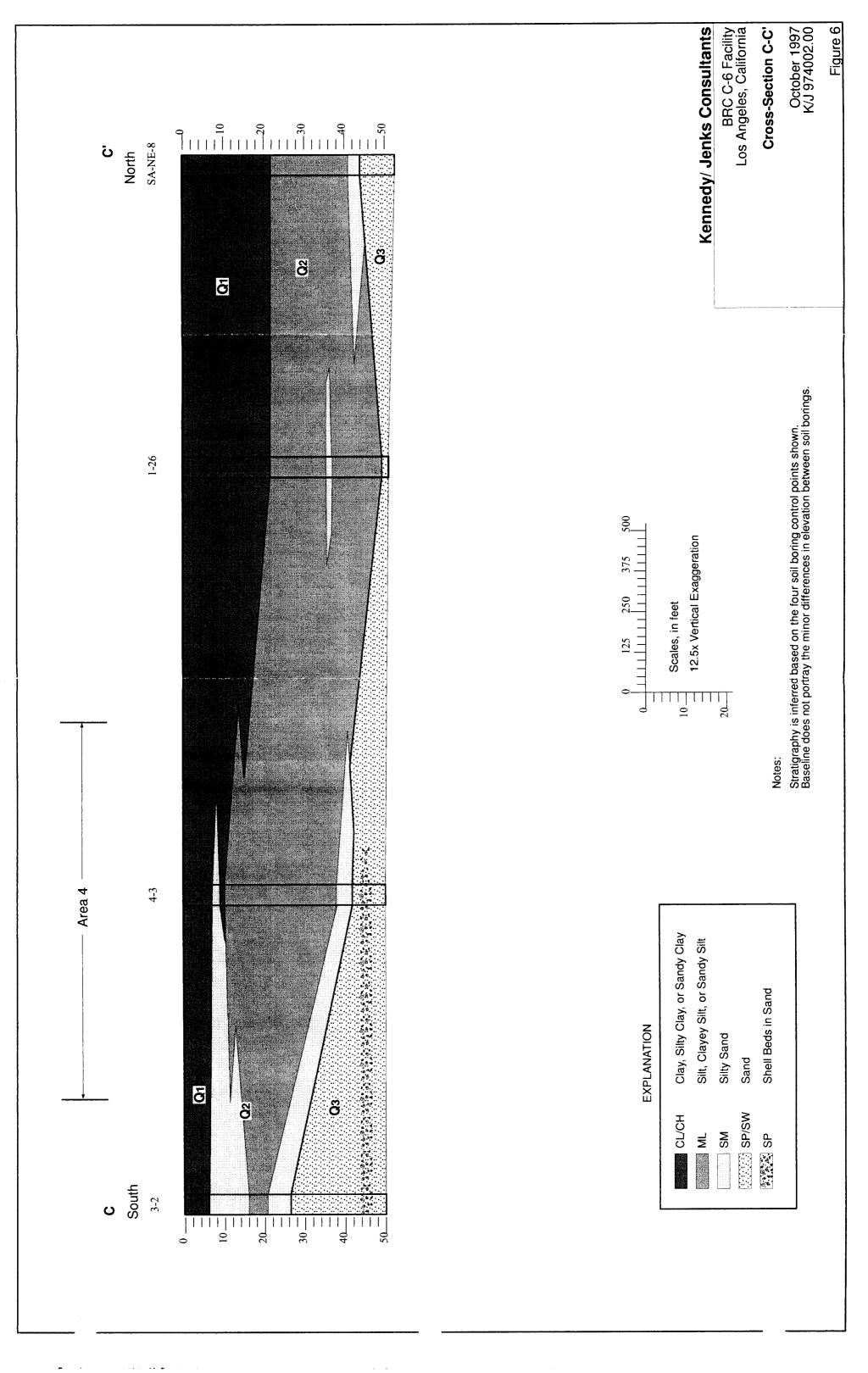


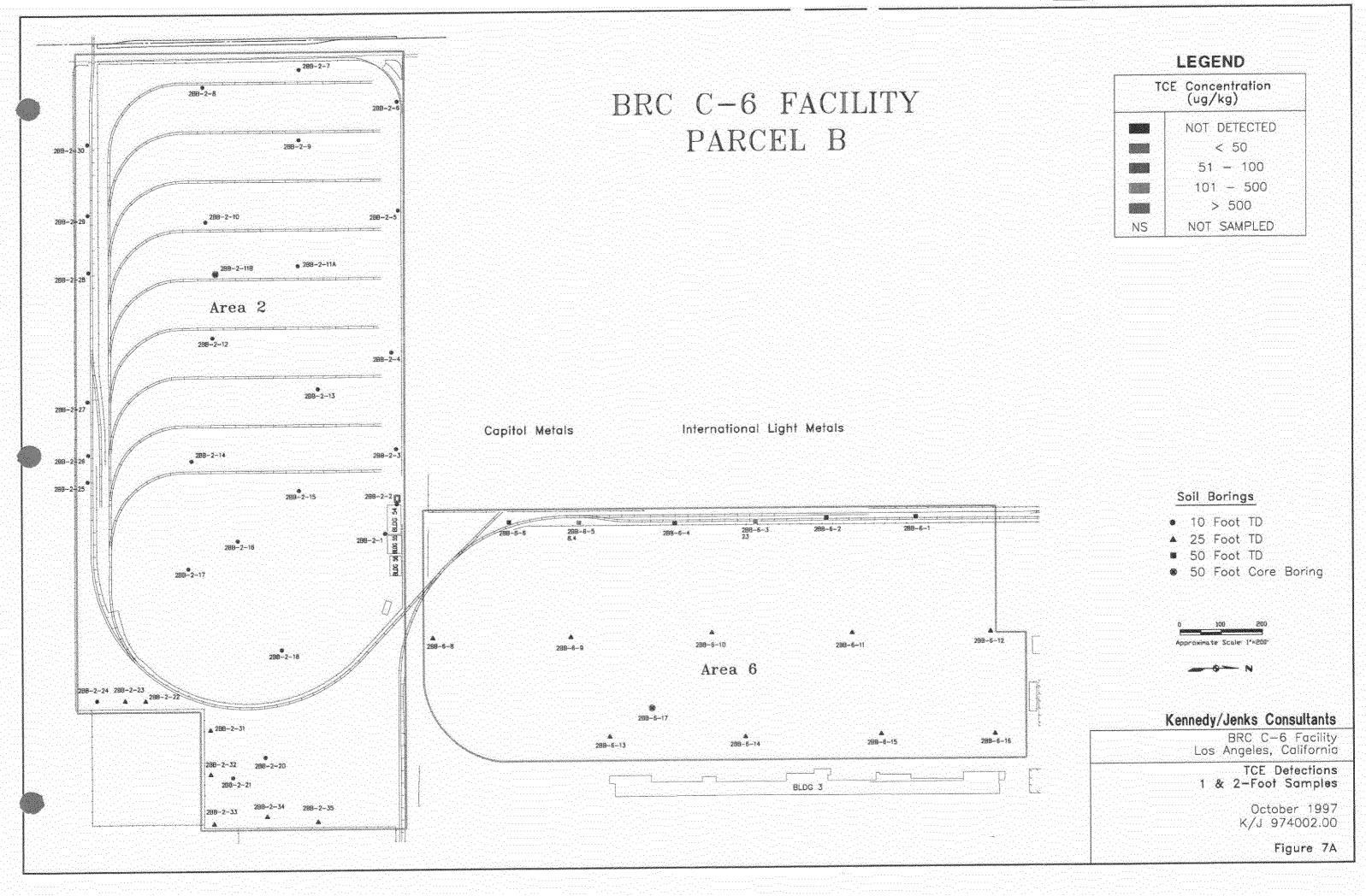


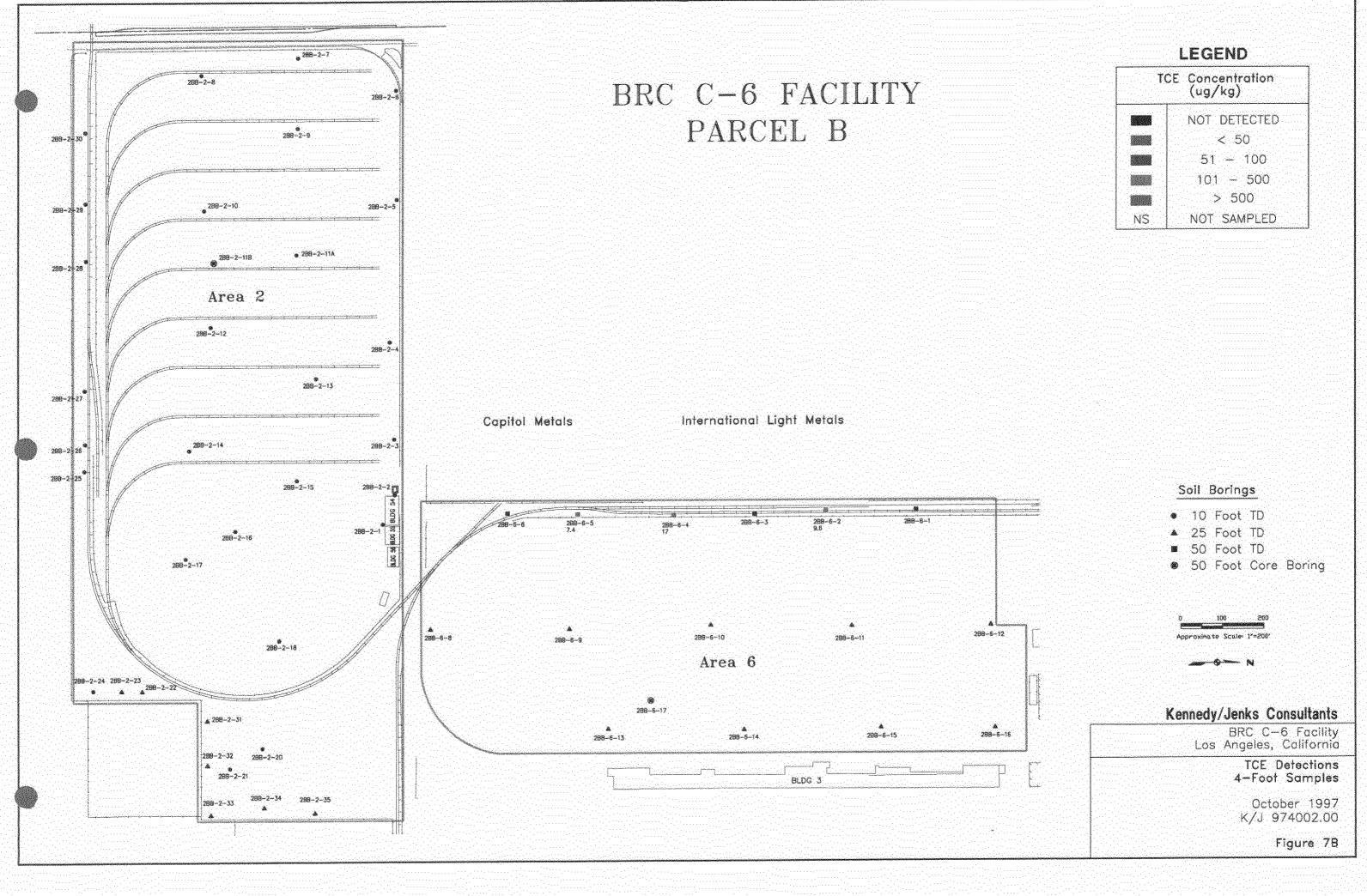


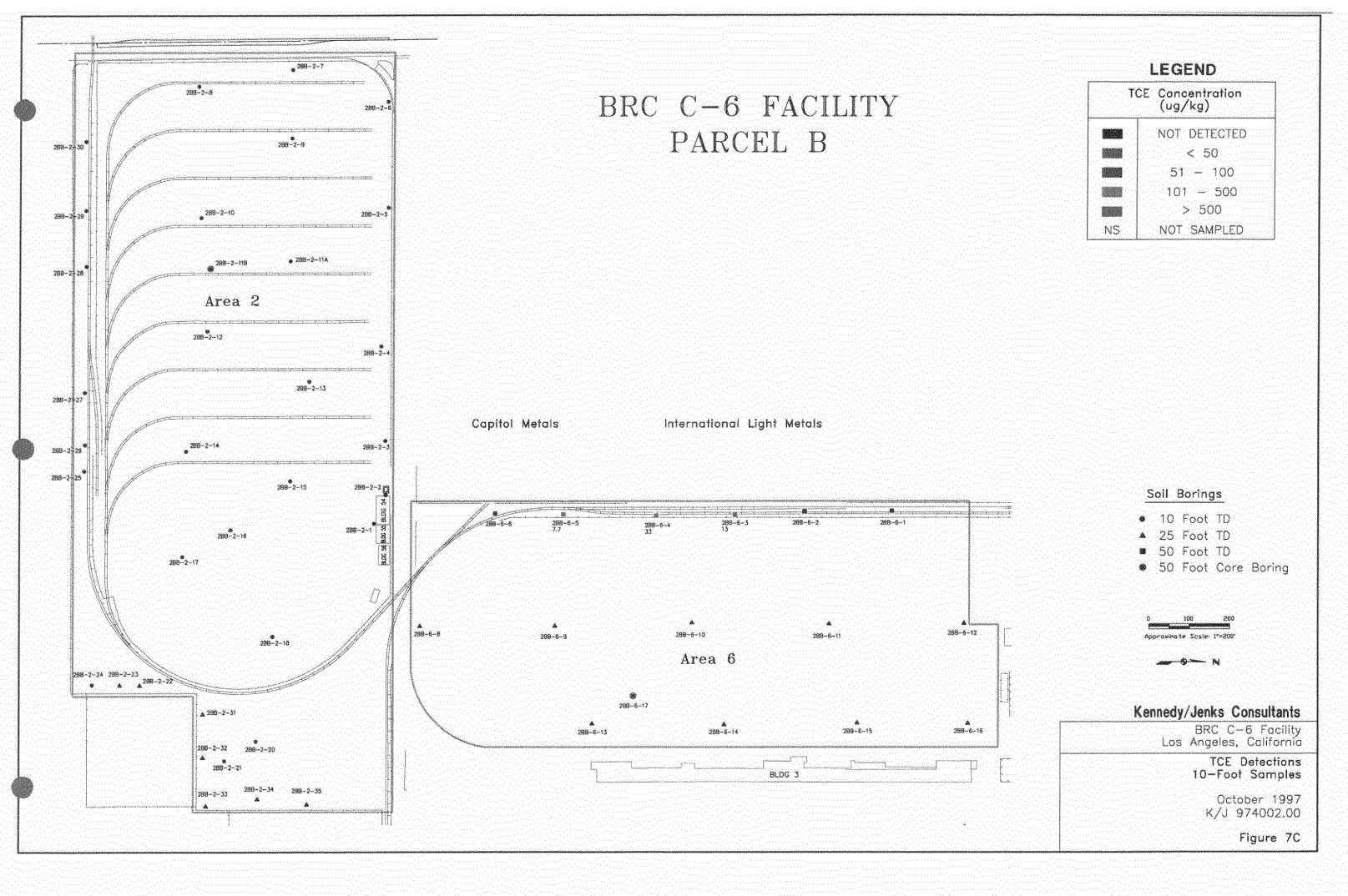


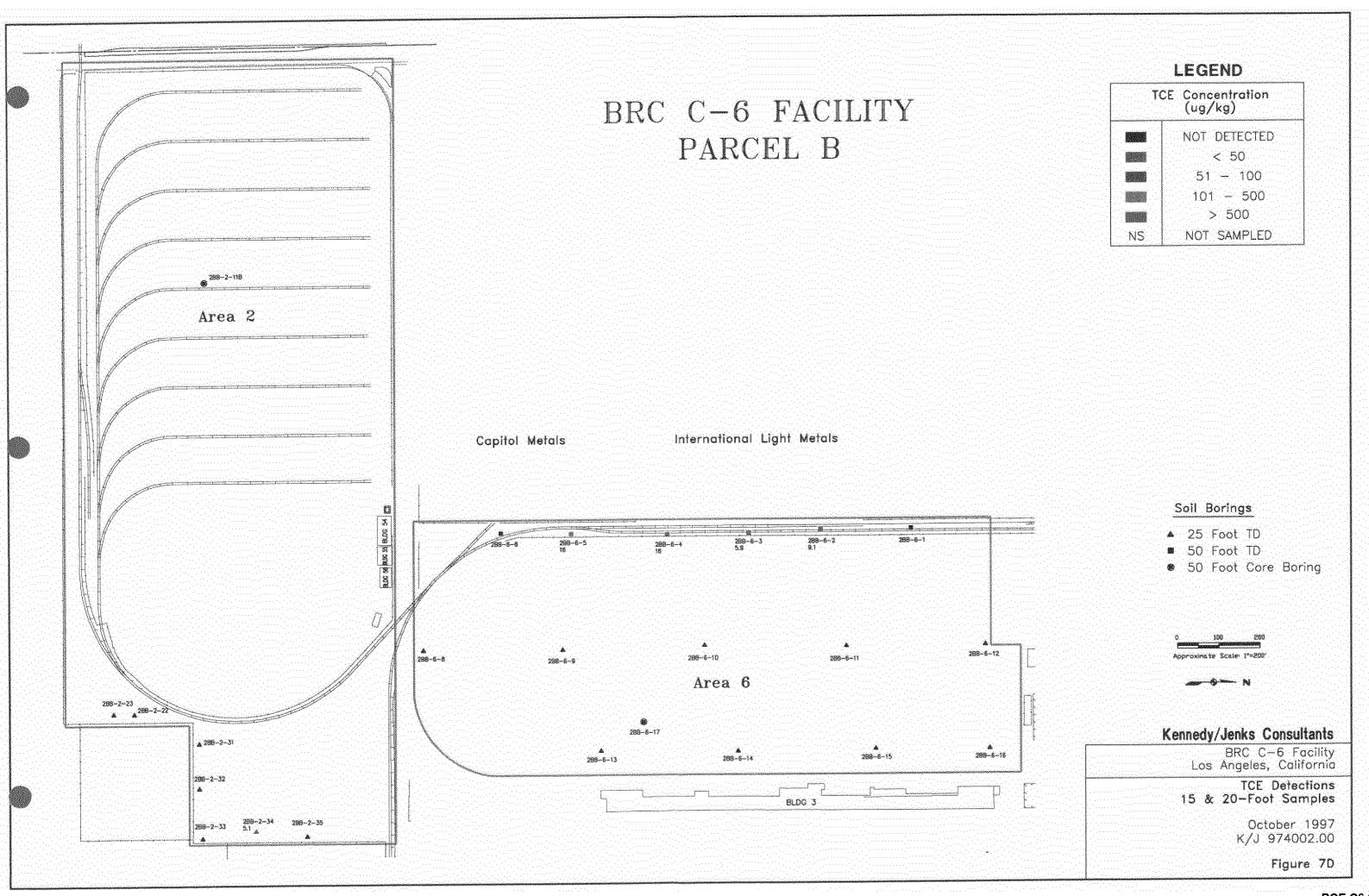


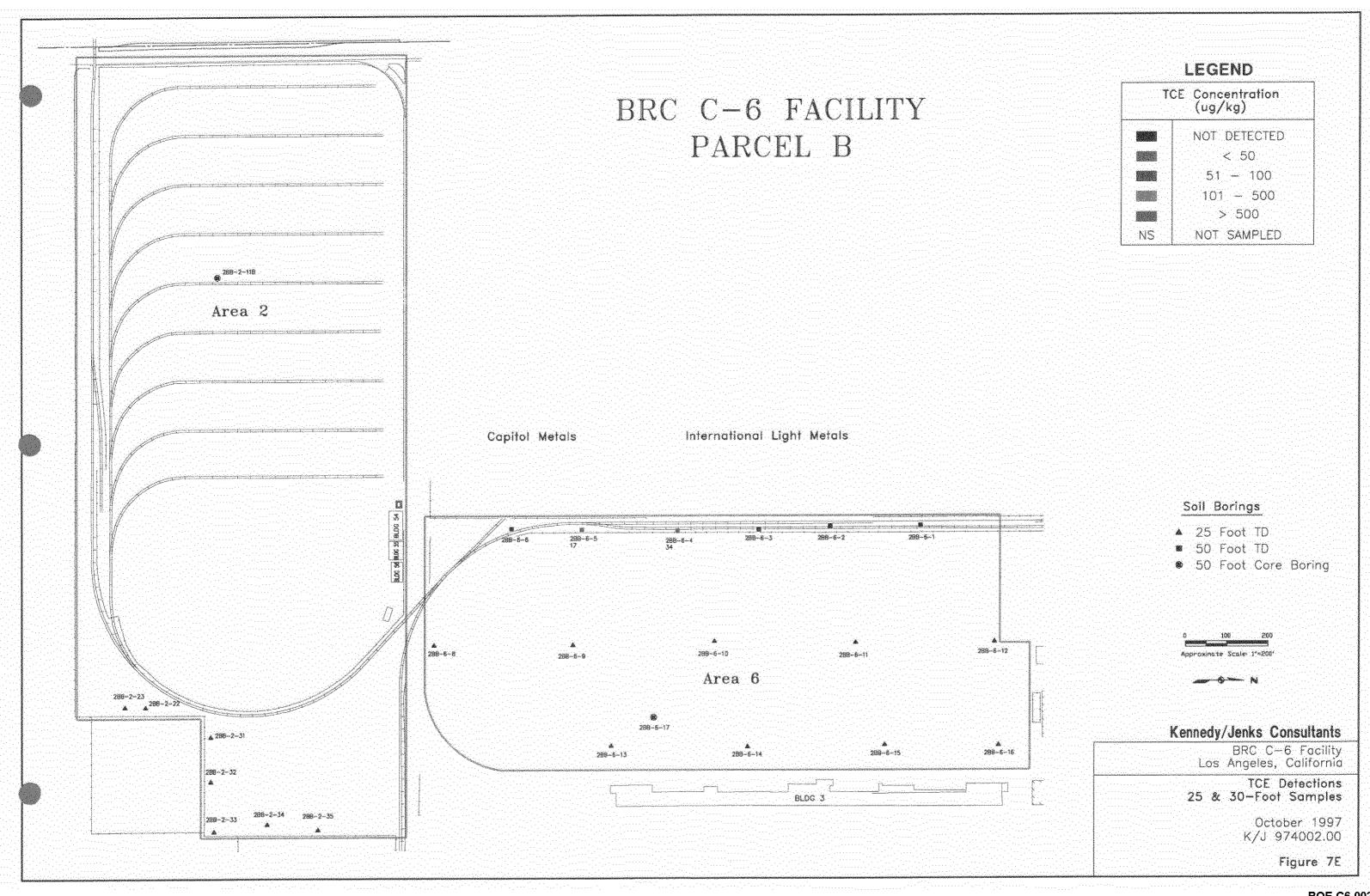


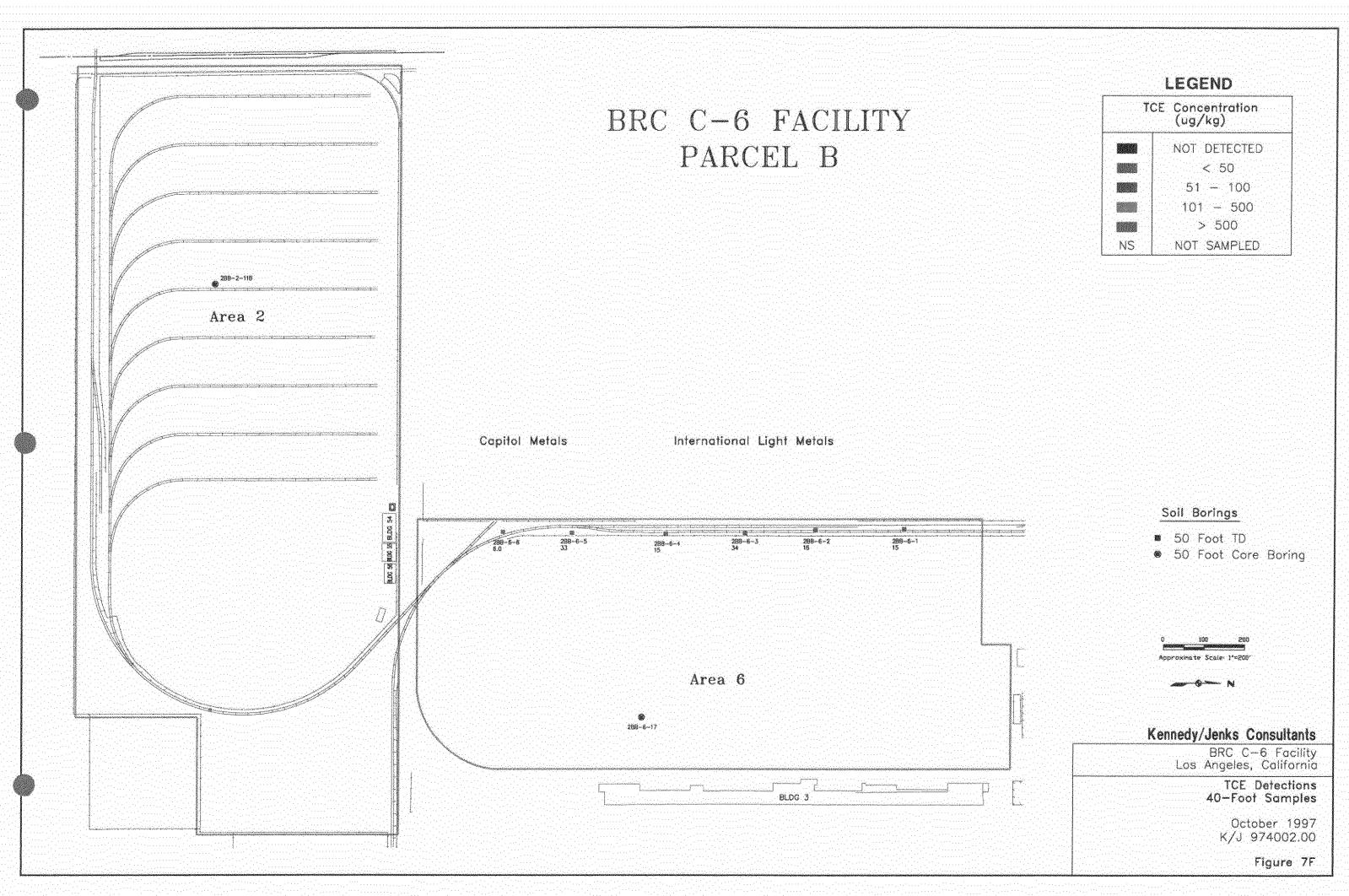


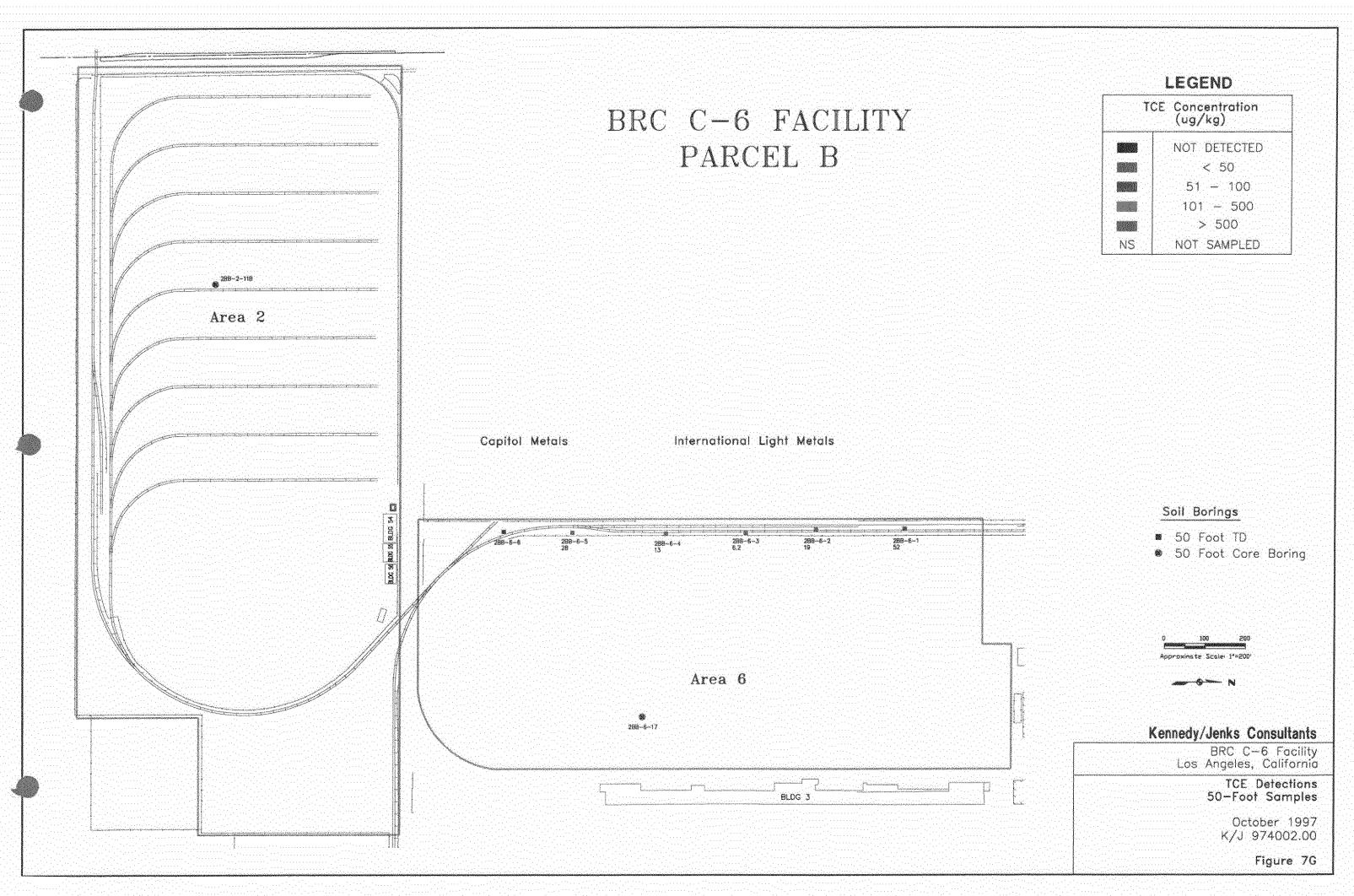


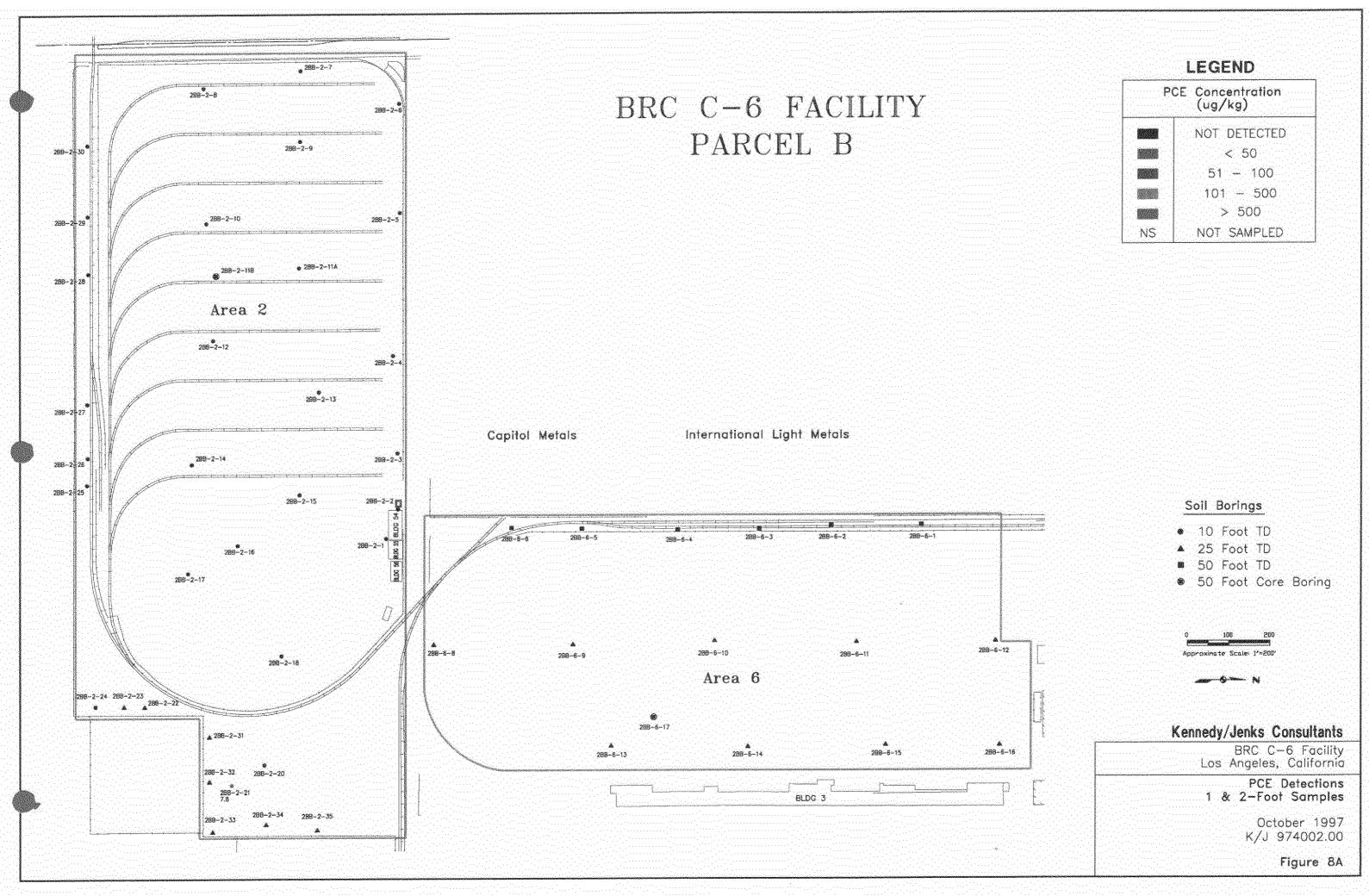


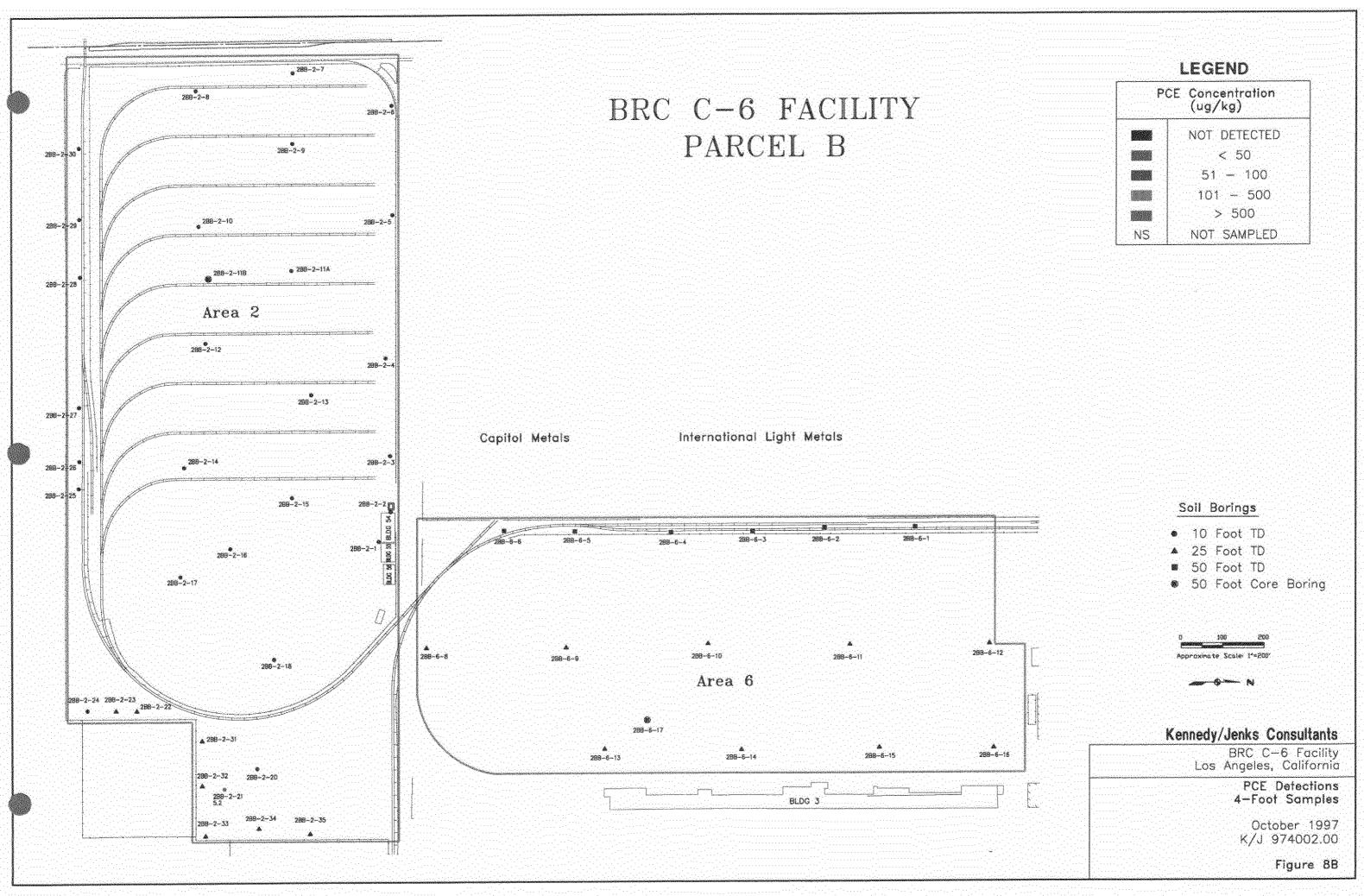


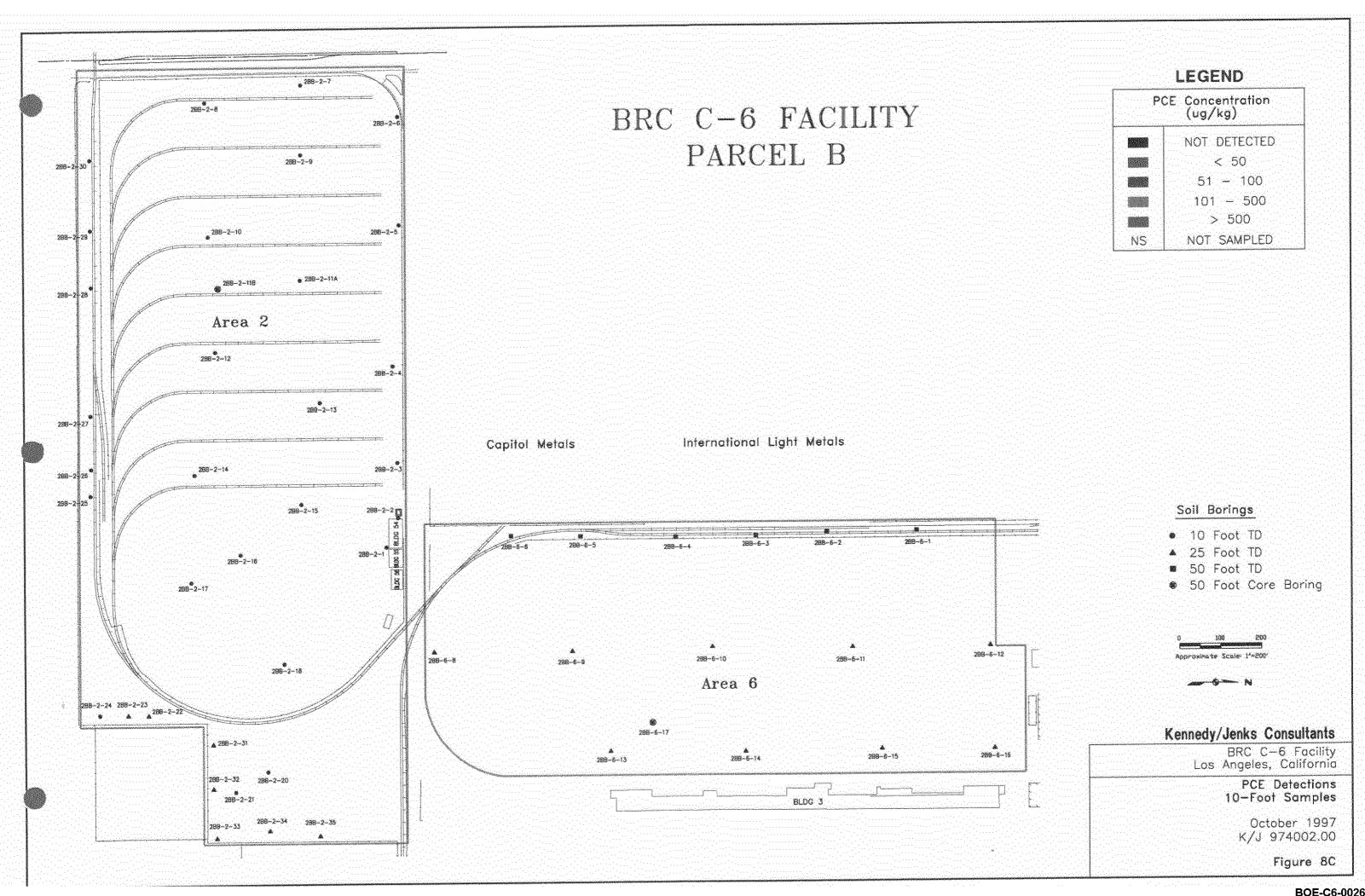


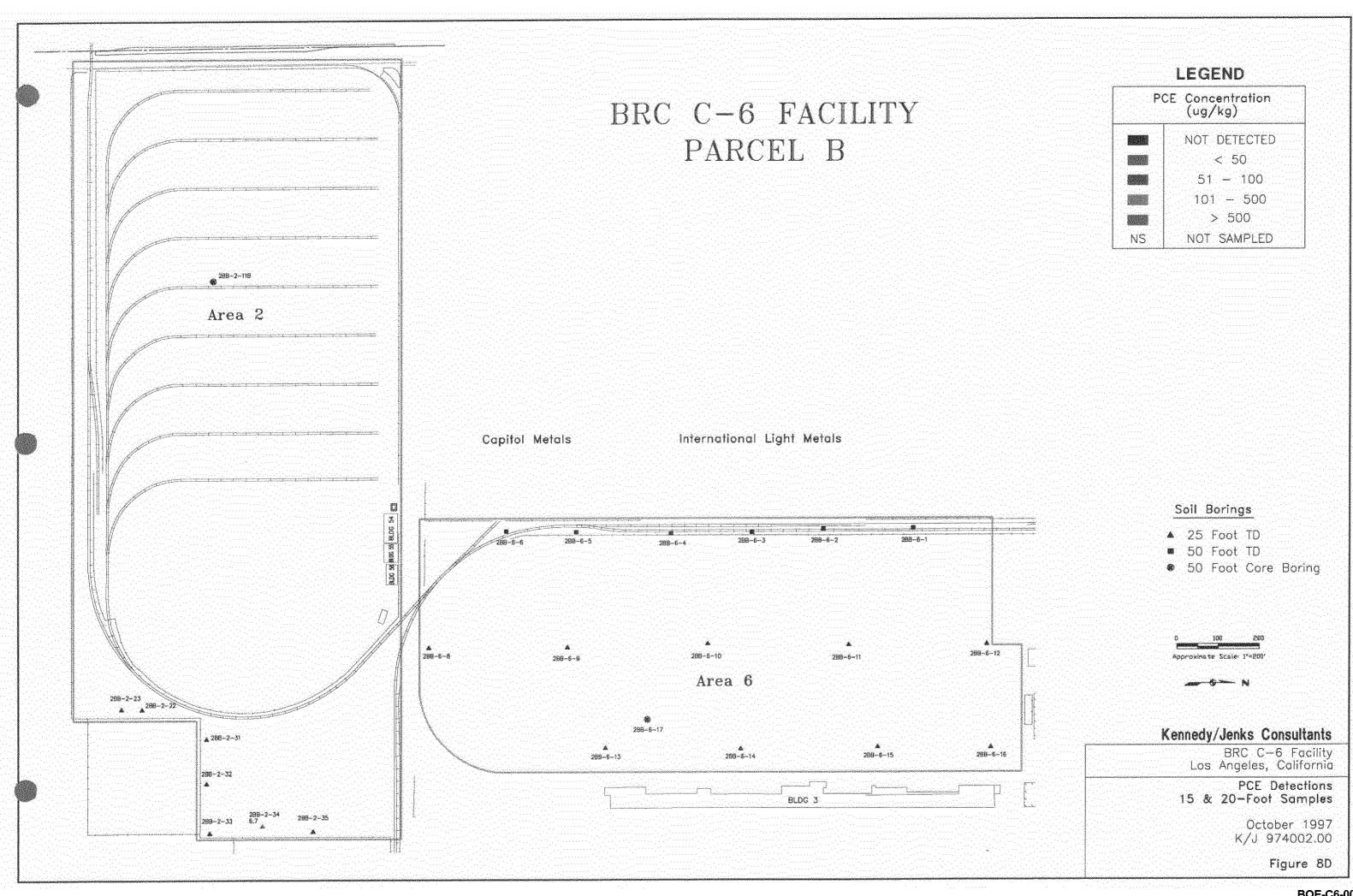


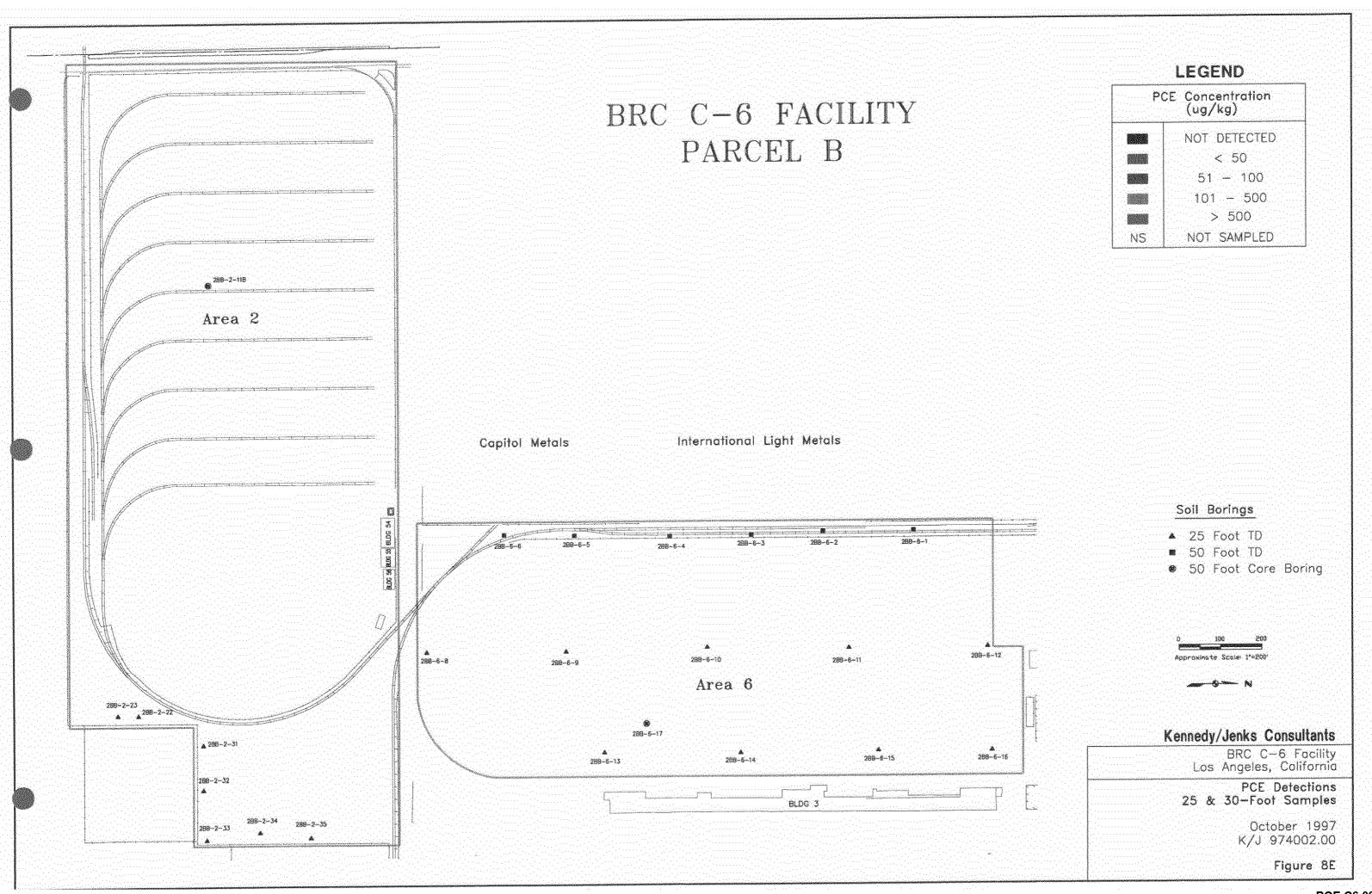


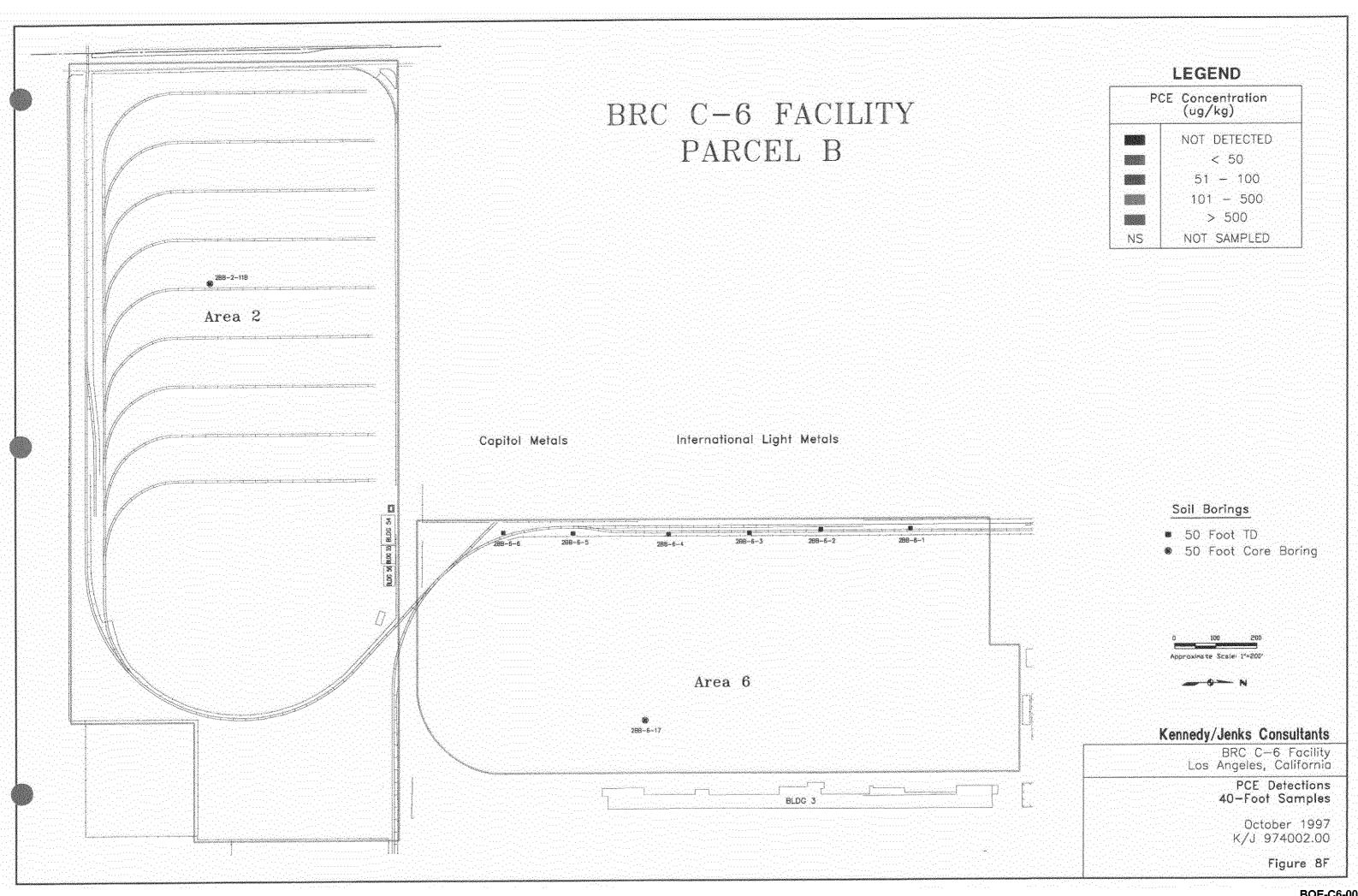


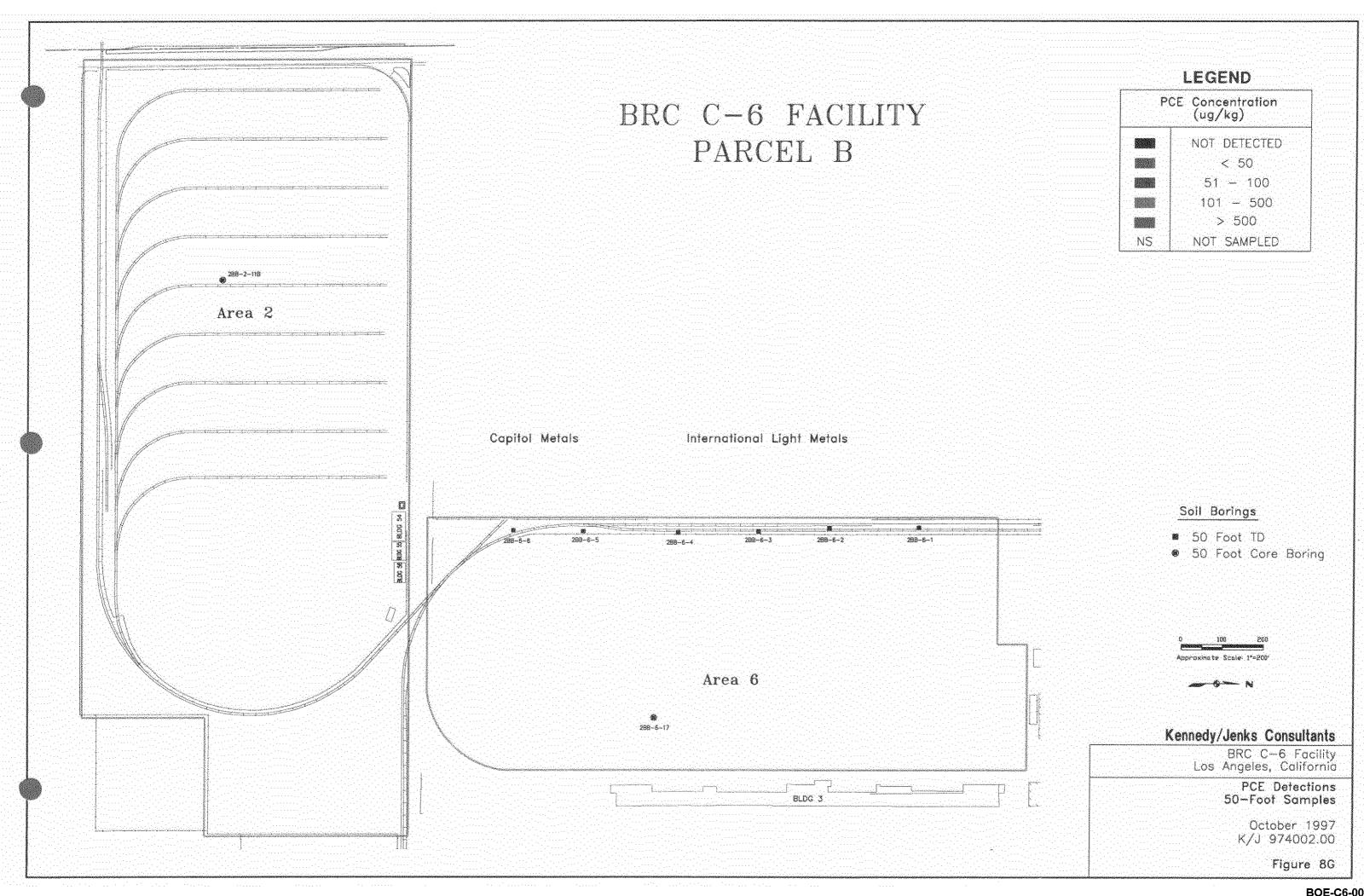


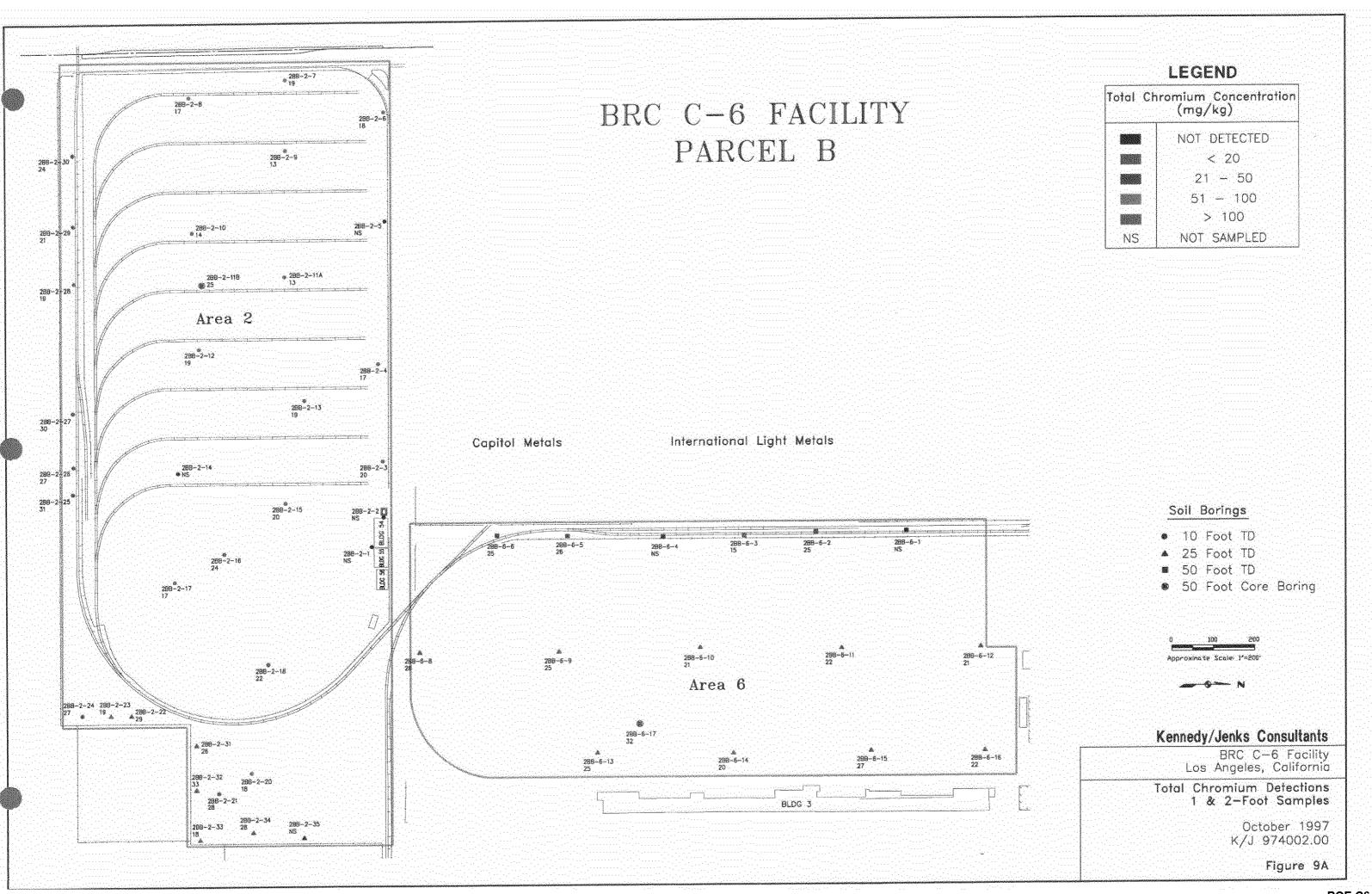


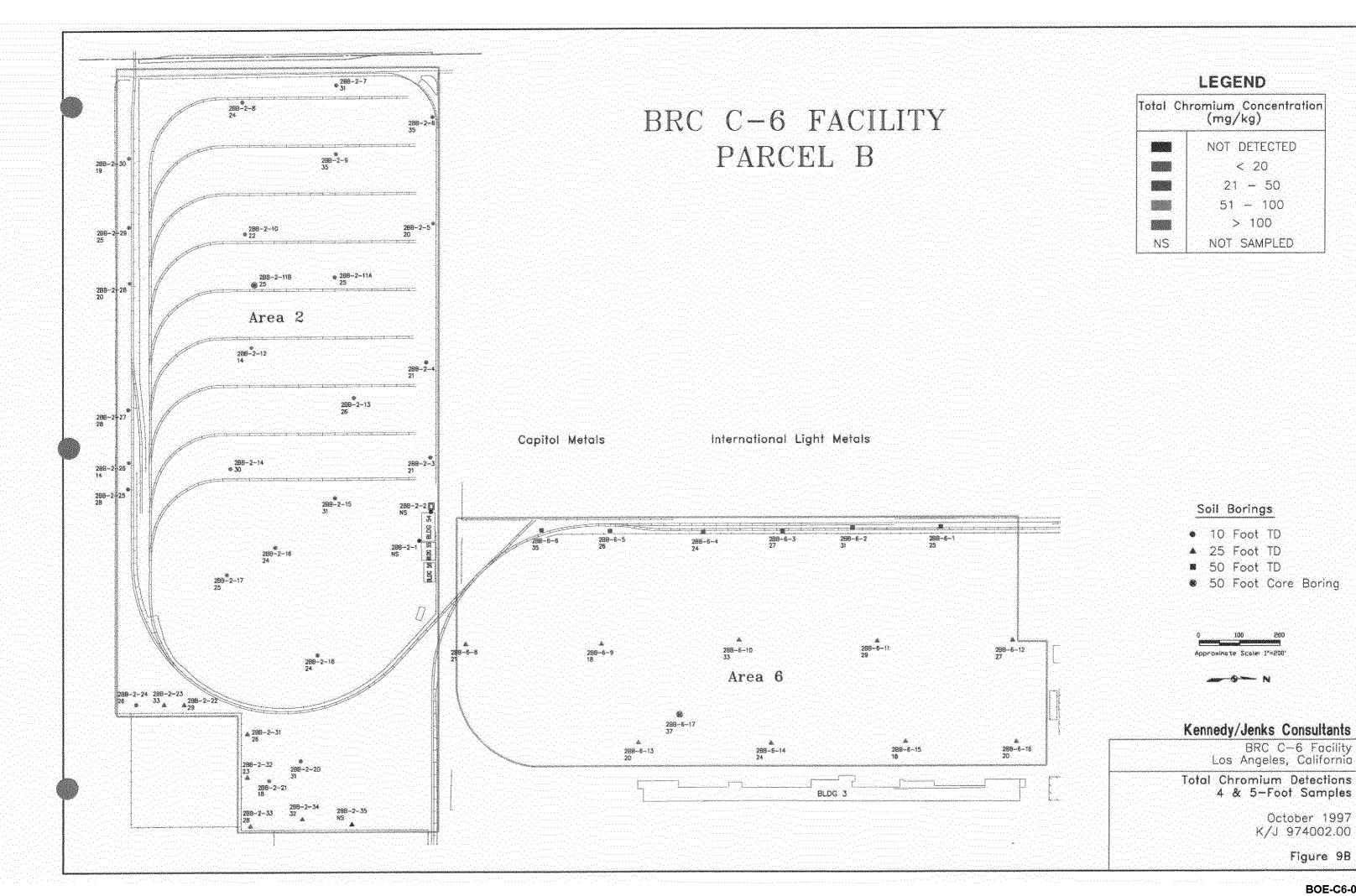


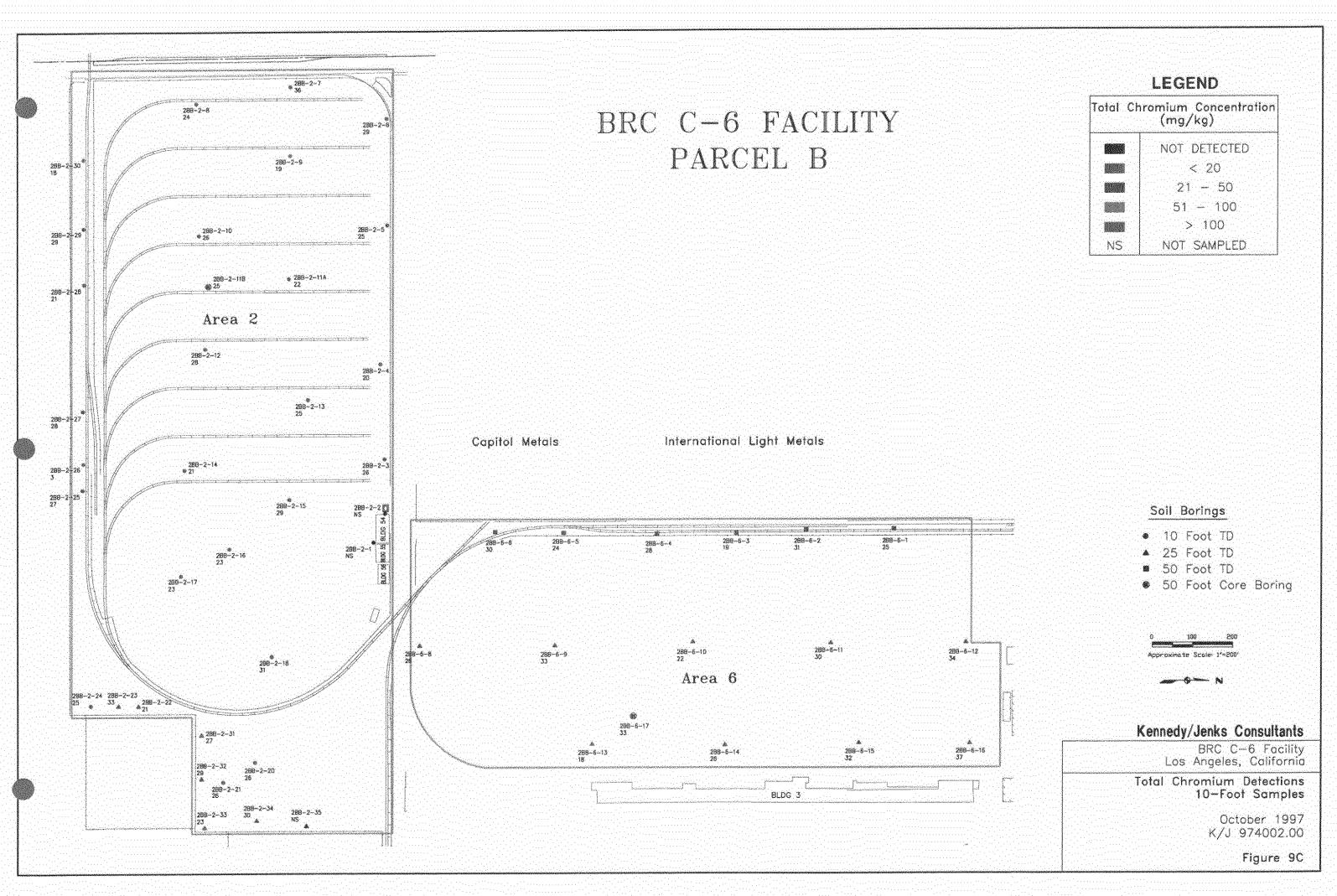


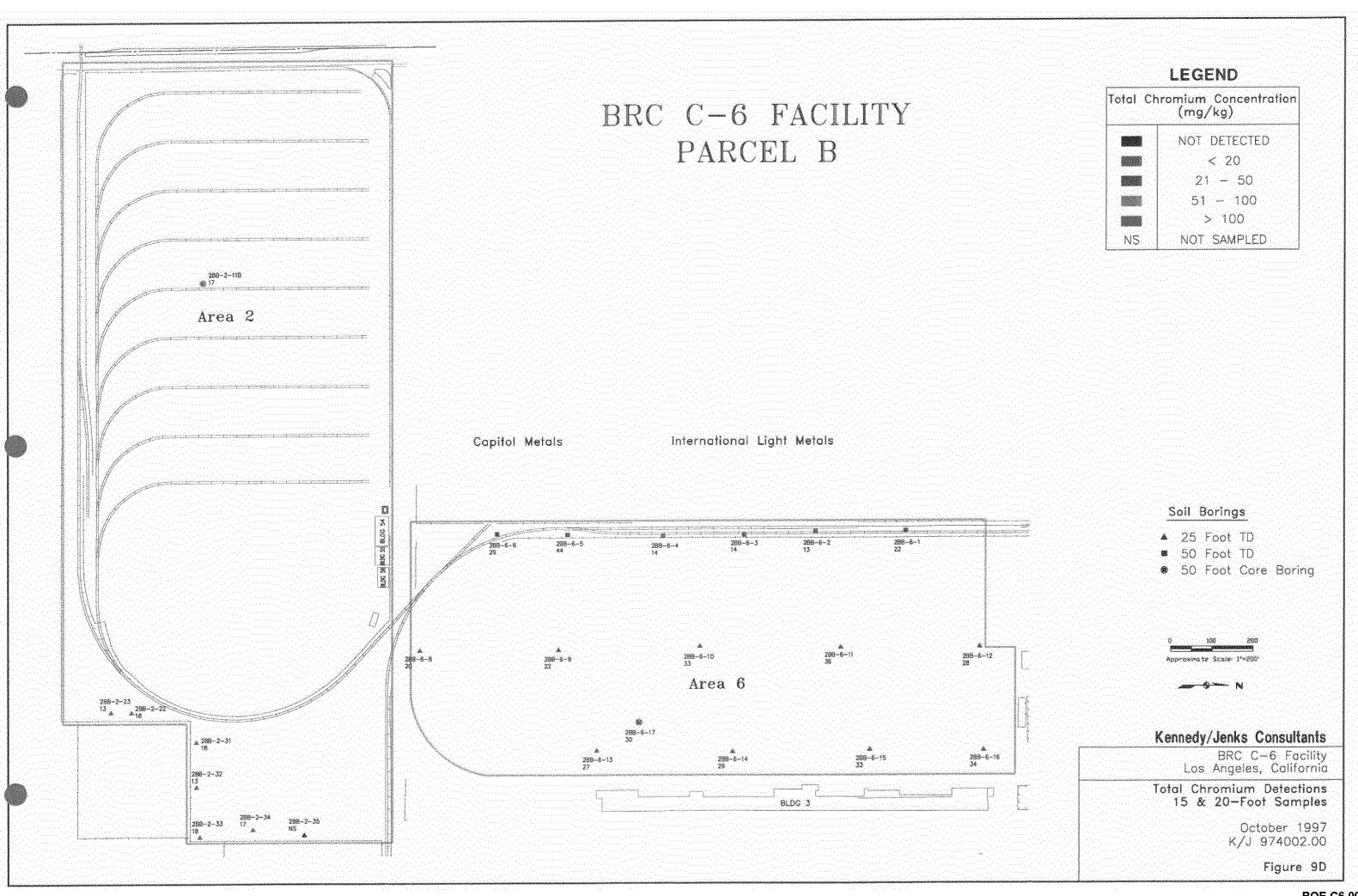


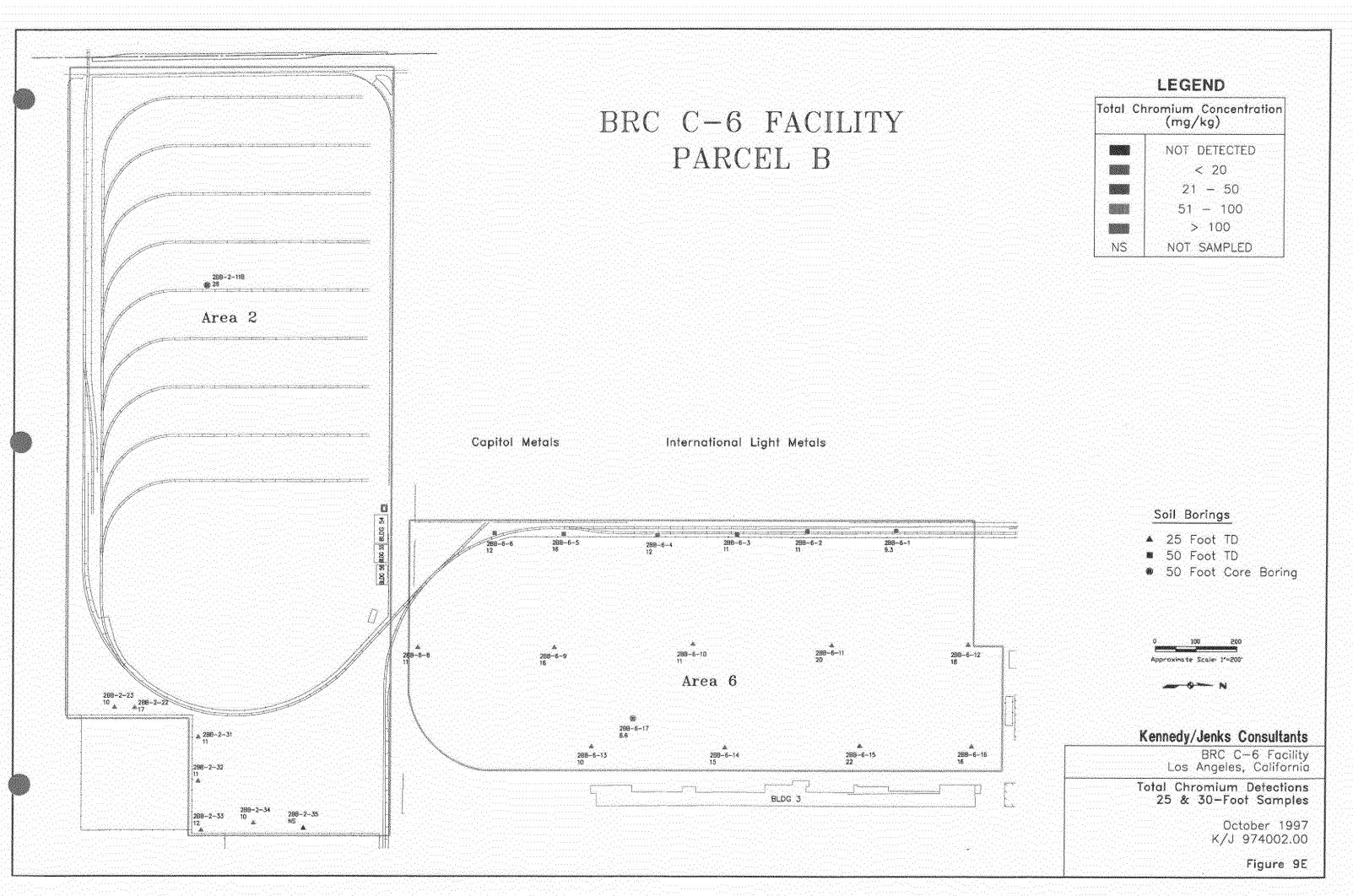


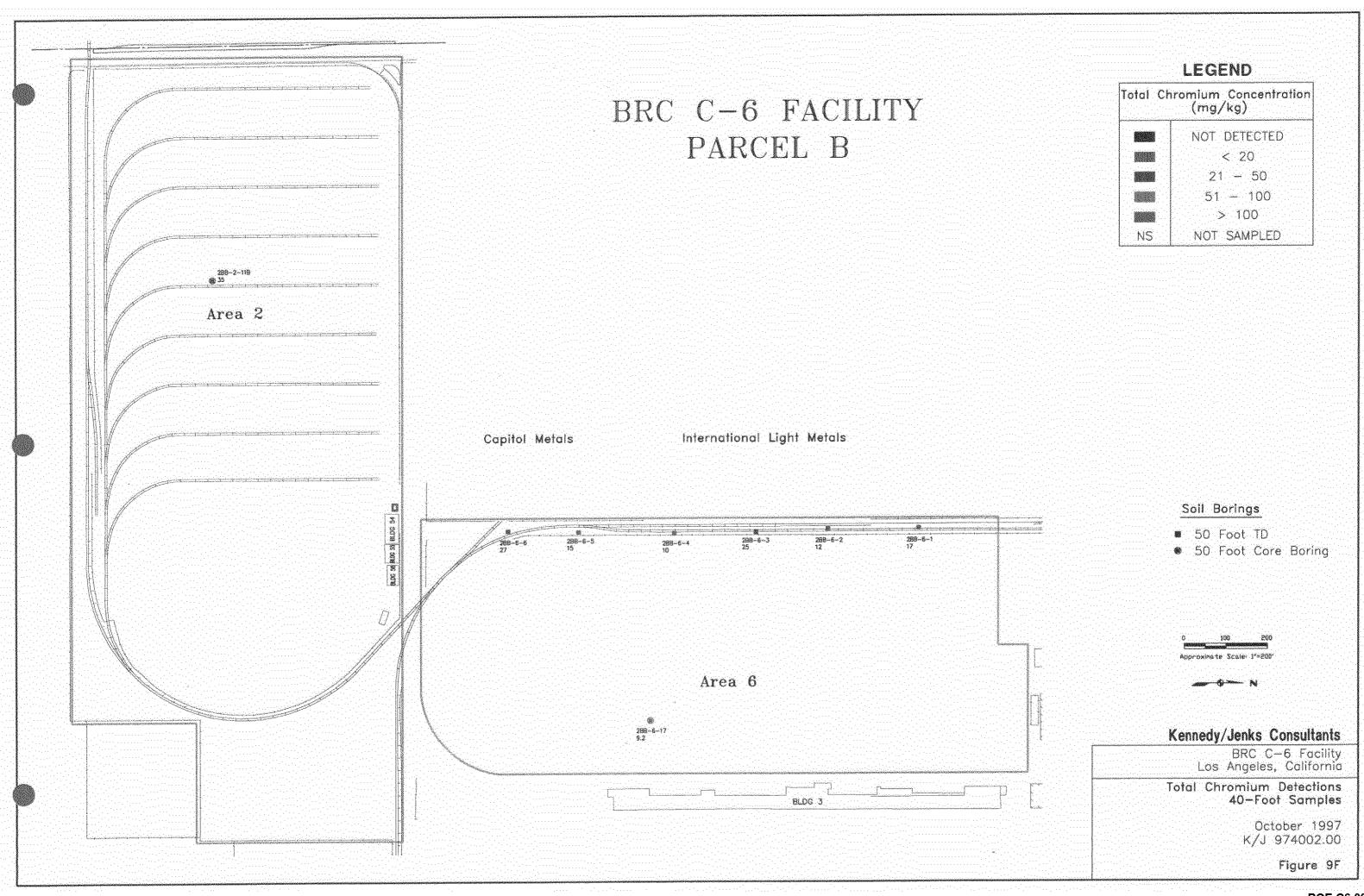


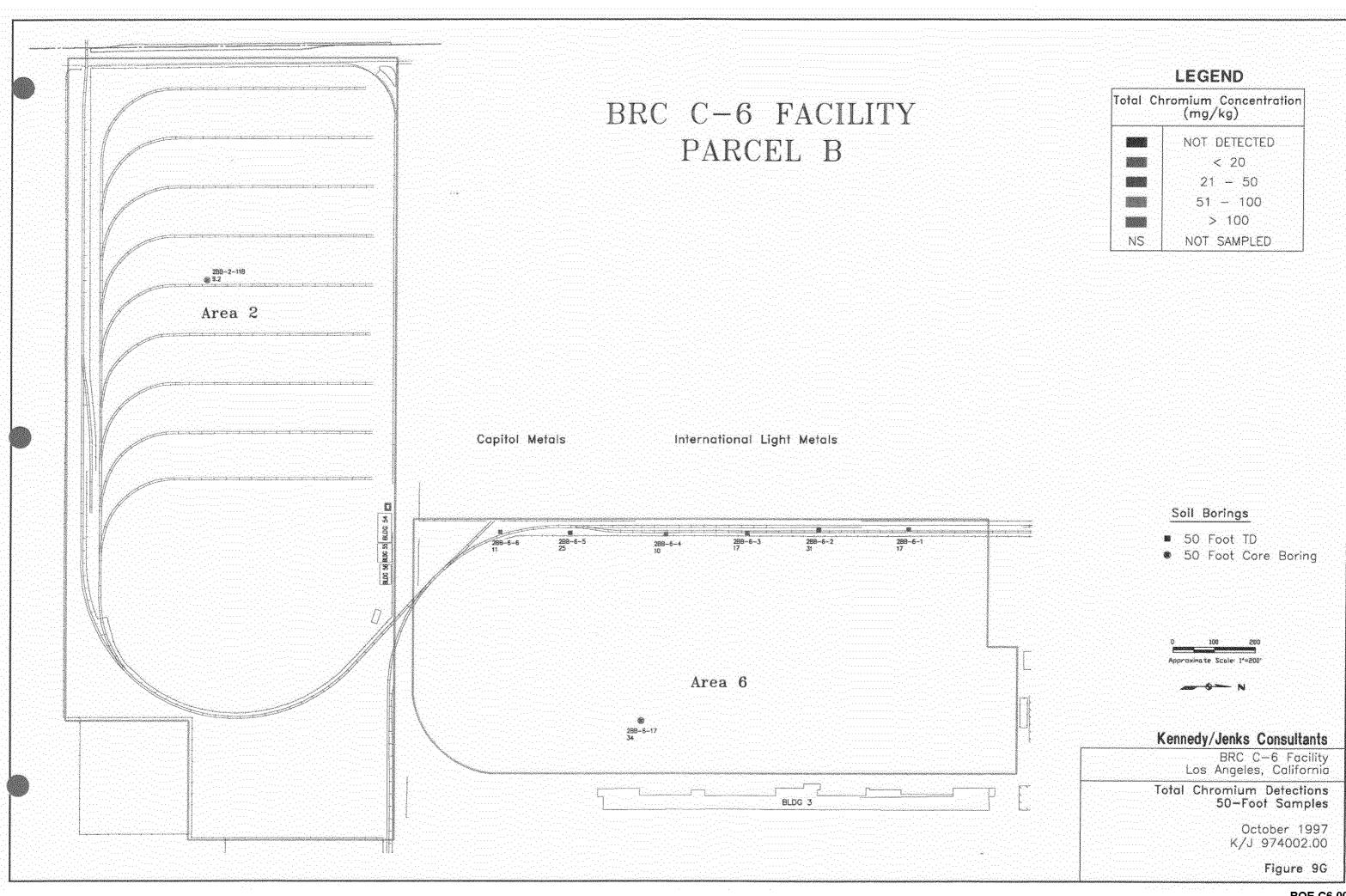


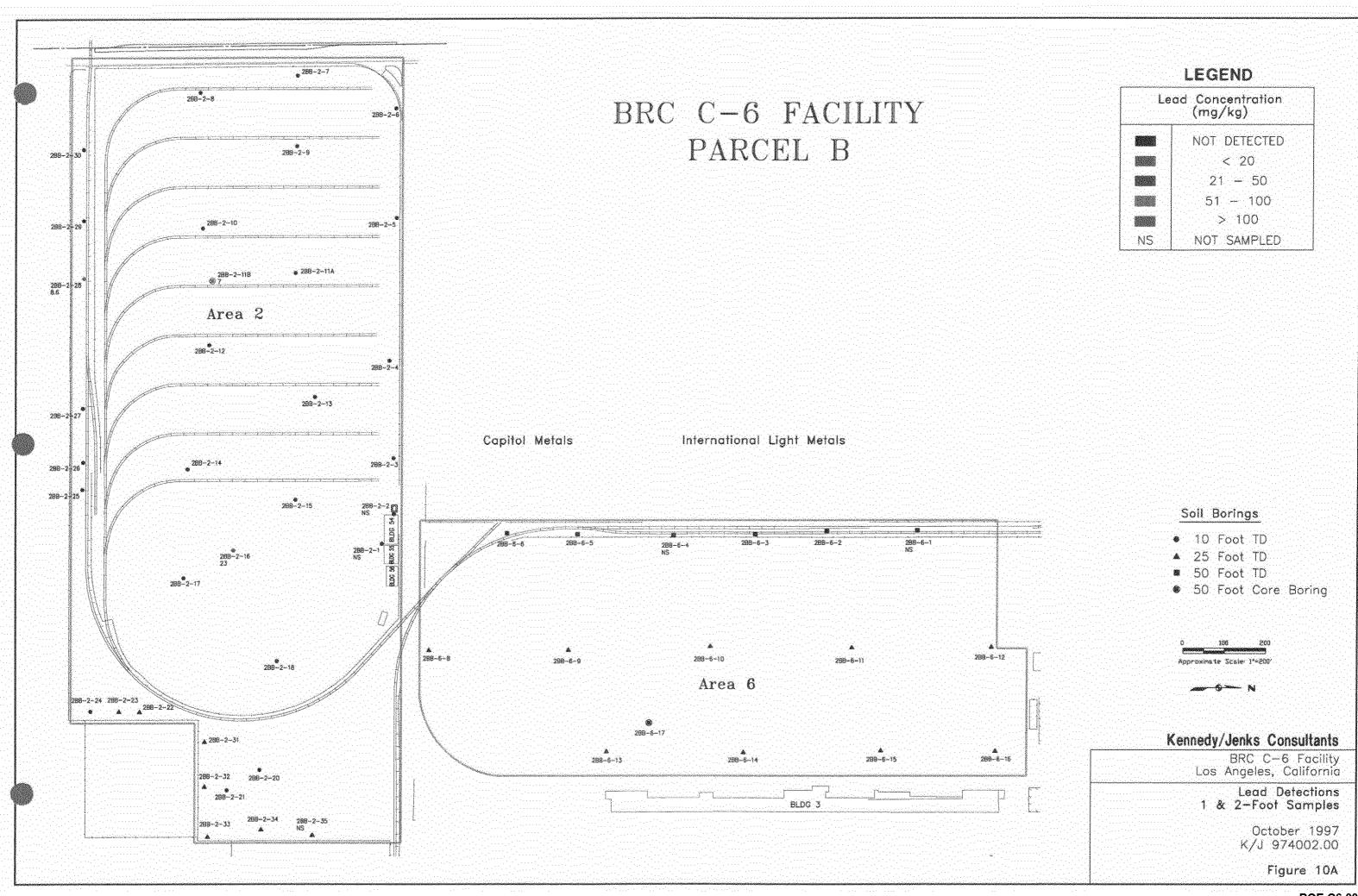


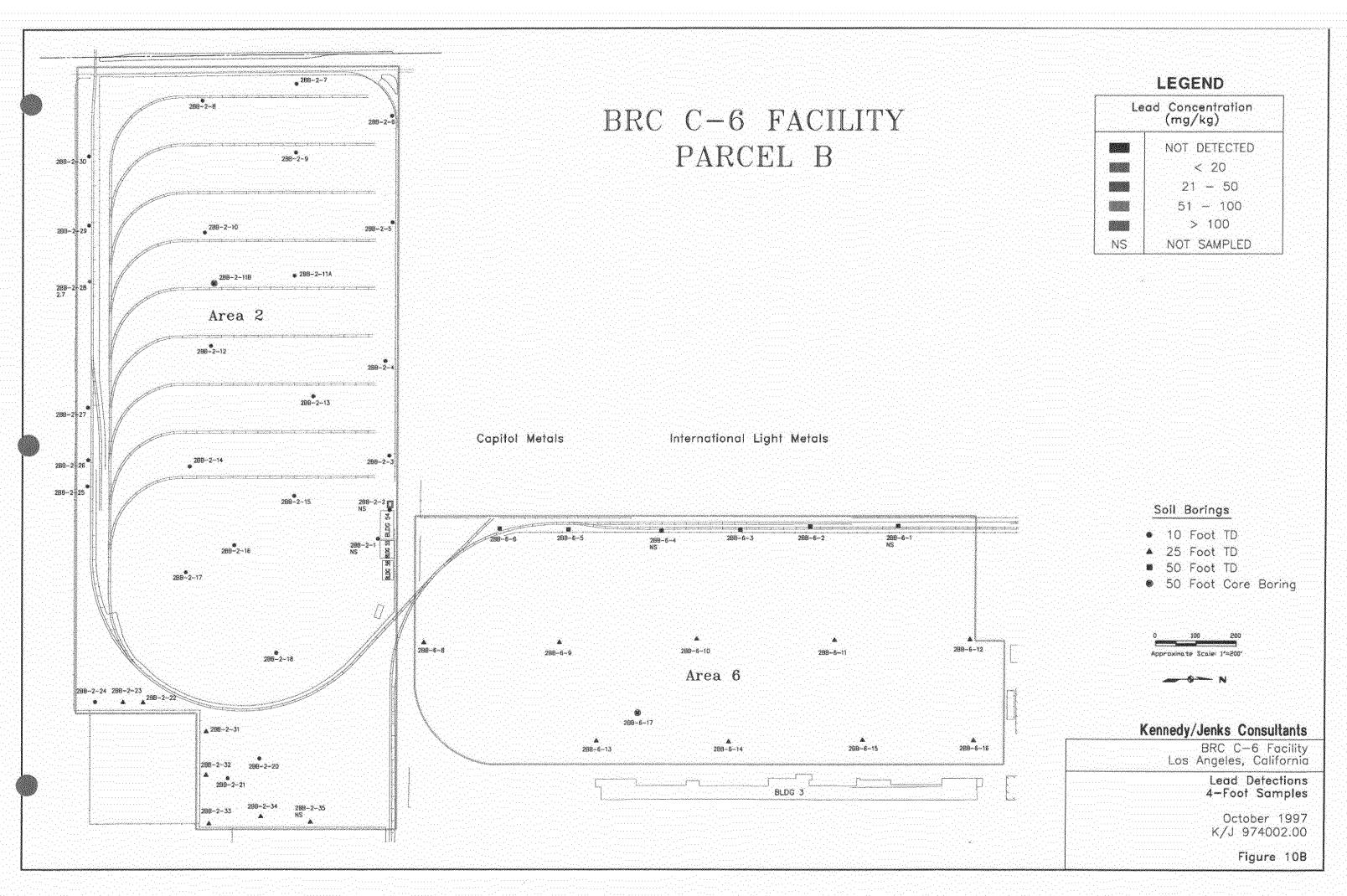


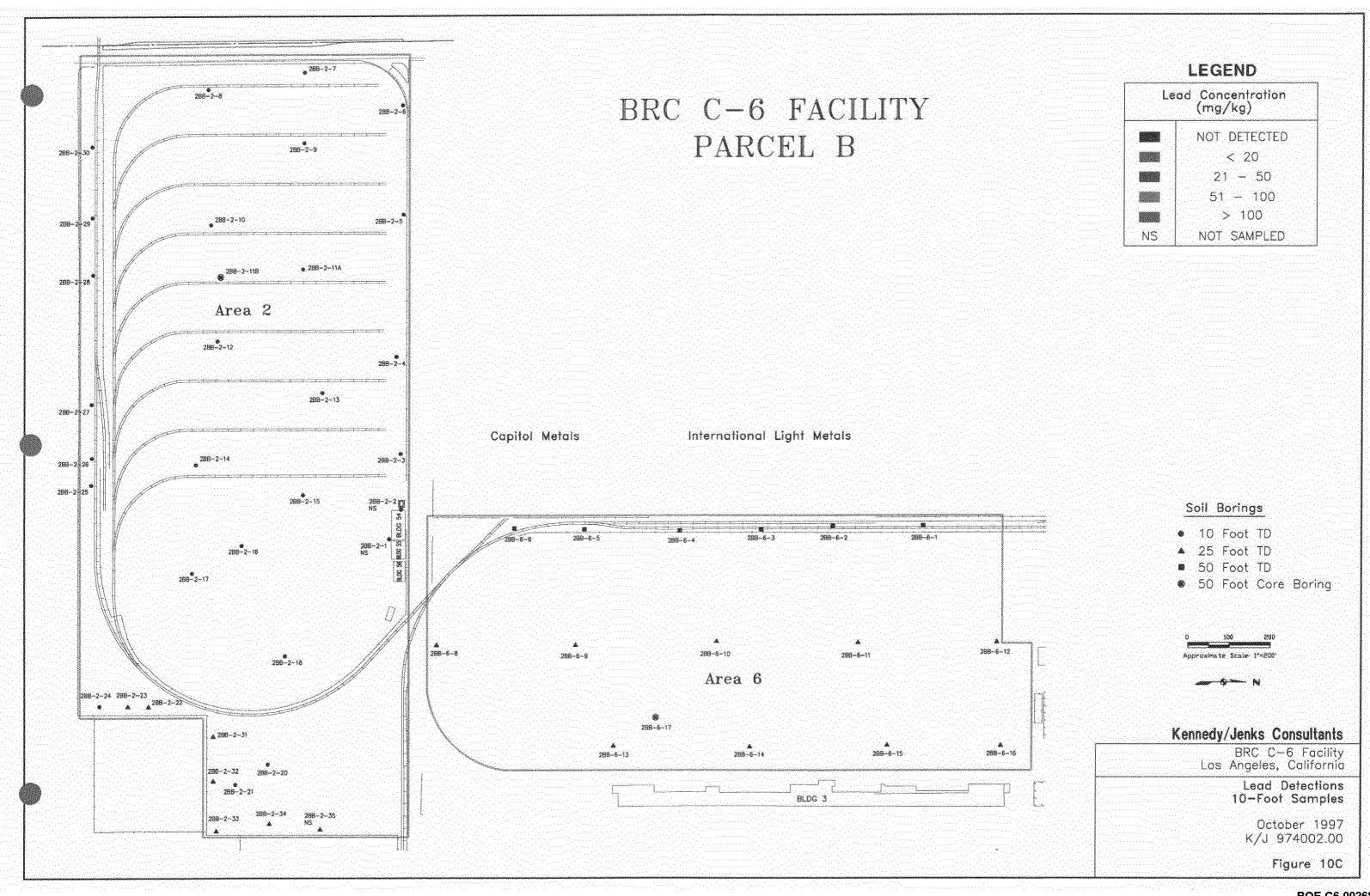


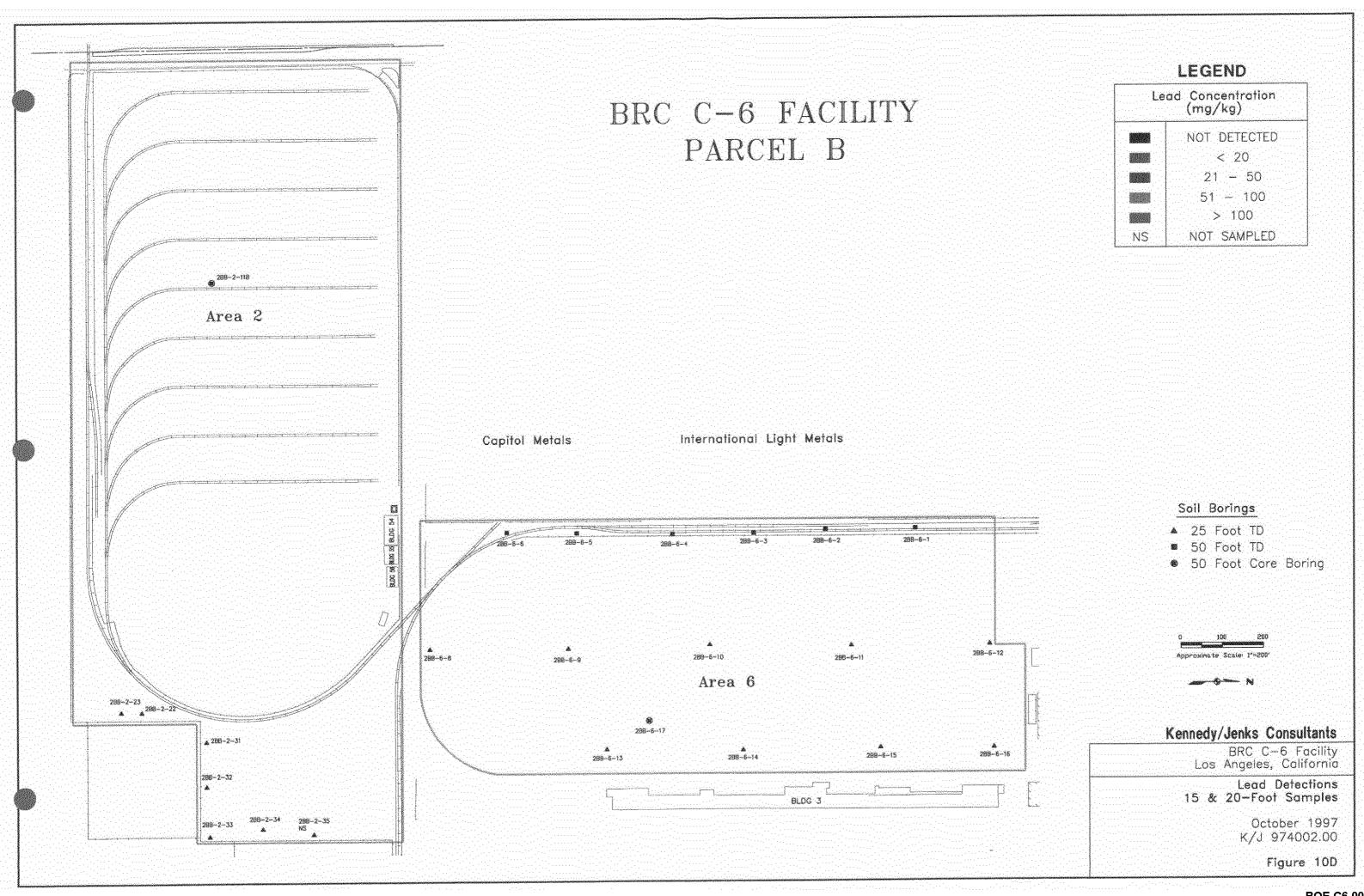


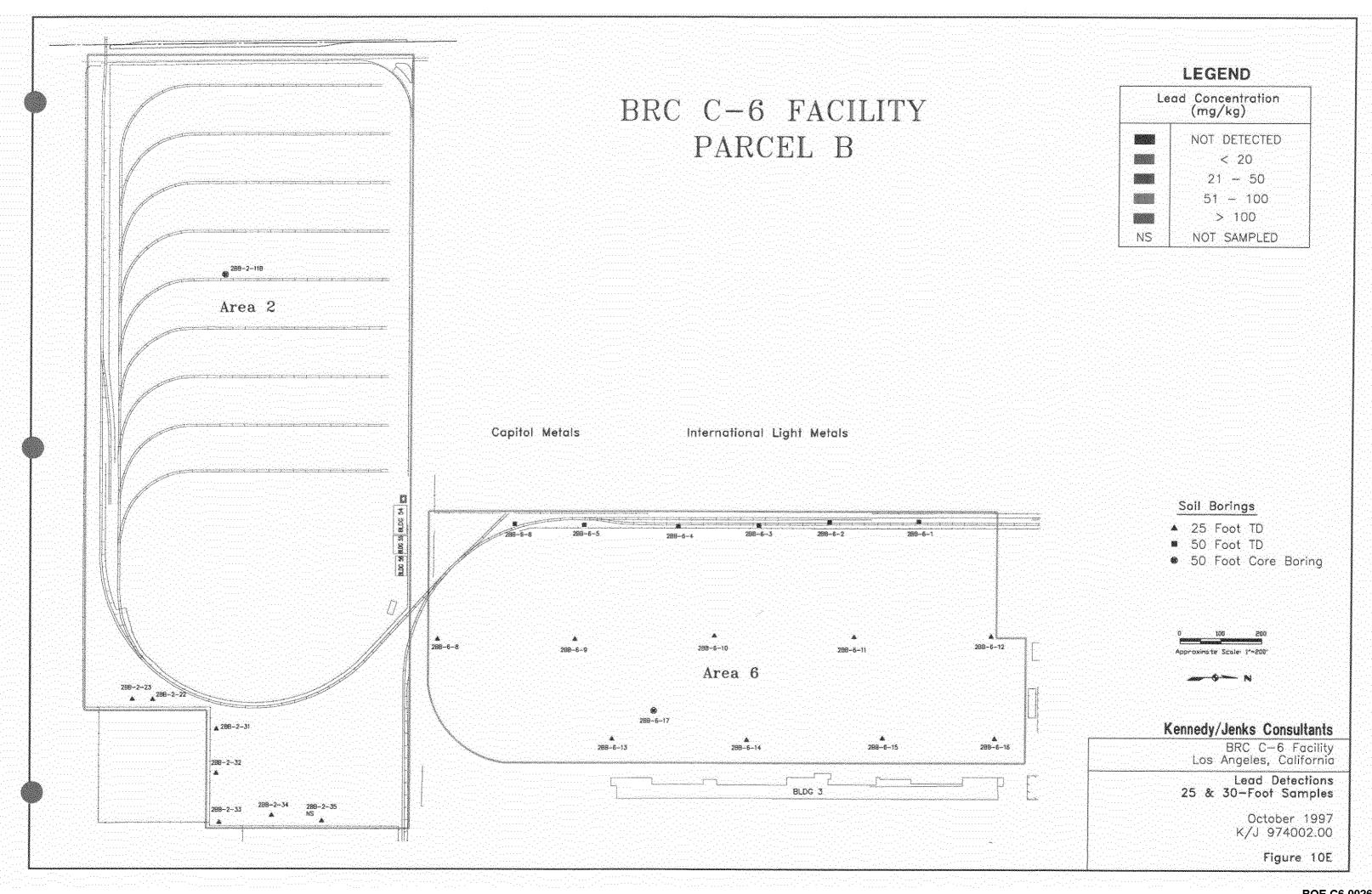


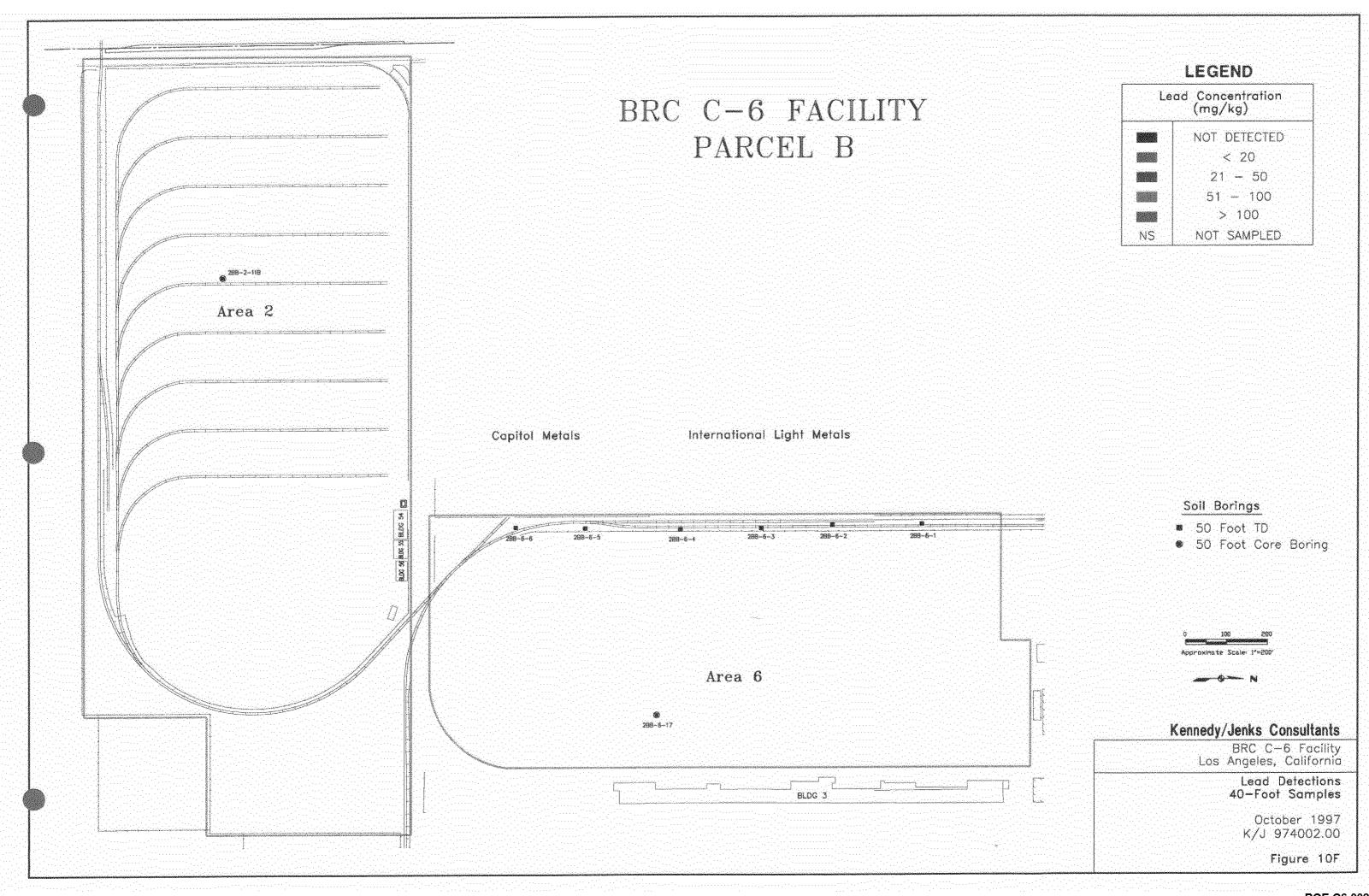


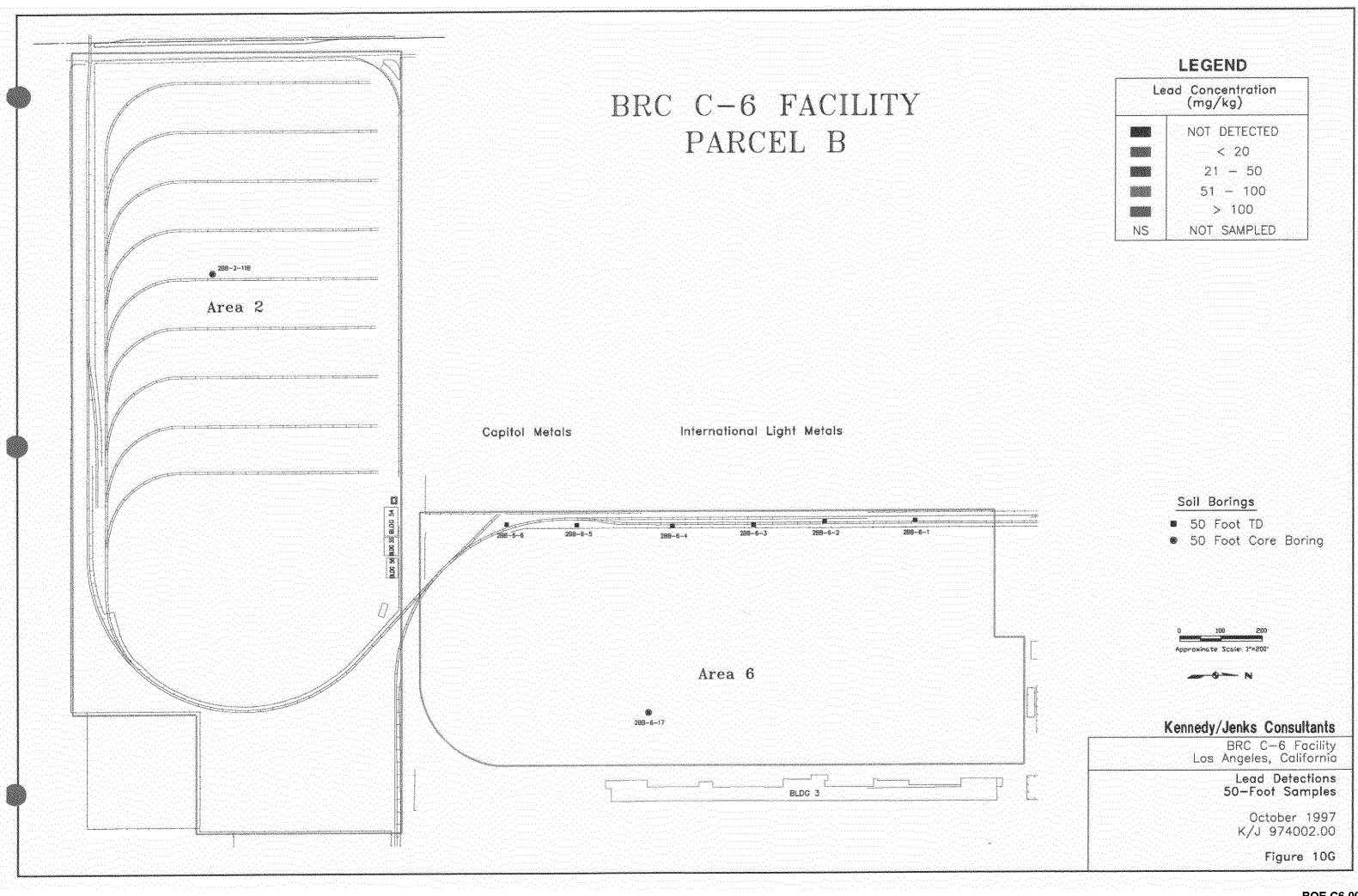












APPENDIX A Boring Logs

Boring Log			Jenks Consultants		
BORING LOCATION Area 2, Building 54			3-2-1		
DRILL INC. COMPANY	DRILLER Joe Abreau		Douglas Aircraft		
Quaternary Investigations DRILLING METHOD (S) Earth Probe	DRILL BIT (S) SIZE 1.5 inches	Project Number 974	002.00		
DEPTH TO WATER		Not Surveyed	TOTAL DEPTH 10 feet		
Not Encountered LOGGED BY		DATE STARTED 4/14/97	DATE COMPLETED 4/14/97		
S, Scrimshire					
Depth (feet) Lithology Log Log Log Log Log Log Log Log	S Munsell So	OIL DESCRIPTION AND DRILL	ING REMARKS		
5 \$ 3 \$25 \$25	10YR 3/2 Asphalt, 3" Clayey SILT: very d	lark gray brown, firm, moist			
ML -	2.5 ¥ 4/4 Sandy SILT: olive b	rown, fine sand, soft, slightly mois			
5-	10YR 4/2 dark gray brown				
	10YR 4/4 dark yellow brown				
	10YR 4/3 Clayey SILT with S	and: brown, fine sand, firm, slightl	y moist		
	- Boring terminated a	at 10 feet.	1 - -		
15-	-		-		
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25-			1		
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30-	- - - -		-		
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			-		
			- - -		
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feet
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Borin								Kem		nks Consultants
BORING LO	CATIC	N . Tool !	Storage	Yard				Boring Name ——	2BB-2	
DRILLING	COMPA	NY			D	RILLER Joe Abr	eau	Project Name	Dougla	as Aircraft
LING	METHO	D (S)	IIVESTIZ	gations	D	Joe Abr RILL BIT (S) SIZE 1.5 inch	ne .	Project Number _	974002	2.00
DEPTH TO	WATER	Probe				1.5 Bten		ELEVATION Not Surveye	ed	TOTAL DEPTH 10 feet
LOGGED B	BY	count	ered					DATE STARTED 4/14/97		DATE COMPLETED 4/14/97
SA	J. Kni MPLES	ght	т			1				
Driven Recovered Collected	Penatration Resistance (blows/fbot)	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color	SO Asphalt, 3"	IL DESCRIPTION AND	DRILLING	REMARKS
			-		CL	10YR 2/2	Aspnan, 3 Silty CLAY: very dark	k brown, stiff, moist		
			-			10YR 3/6	dark yellow brown			
			5-		ML	2.5Y 4/4	Clayey SILT: olive bi	rown, very stiff, slightly n	noist	-
							increasing clay			
			10-			2.5Y 5/4	light olive brown, so	me fine sand		
			-				Boring terminated at	10 feet.		-
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			35	5-						
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	ORING LOCATION 2DD 2.4													
BORING L	OCATIO	N Tool 9	Storag	e Yard				Boring Name -	2BB-	2-4				
DRILLING	COMPA	NY				DRILLER								
	Quate	mary I	nvesti	gations		Joe Abr	eau	Project Name						
DAII.LING	METHO E arth	DD (S) Probe			1	1.5 inch	es	Project Number — ELEVATION	97400	02.00				
LL. TH TO	WATER							ELEVATION		TOTAL DEPTH 10 feet				
LOGGED E		counte	red					Not Surveye	<u>a</u>	DATE COMPLETED				
LOGEDI	J. Kni	ght						4/14/97		4/14/97				
Britven Recovered Collected SS	MPLES Logical Logica Logi	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munseli Color								
	£2.5	5.3	1		CL	10YR 3/2	Asphalt, 3" Silty CLAY: very dark	gray brown, stiff, moist		-				
			5		ML	2.5Y 4/4	Clayey SILT: olive br	 own, hard, dry						
		5.2	10 -				some fine sand, very s	stiff, slightly moist						
-			-				Boring terminated at	10 feet.		- -				
			15-				-			- - -				
-			20-				-			- - - -				
-			25				-			- -				
			30							- - - -				
-			35				-							
			40	-			-							

Rolli			_							mas coms		
BORING L	OCATIO	ON Tool:	Storag	e Yard				Boring Name2BB-2-5				
DRILLING	COMPA	NV				DRILLER Joe Abr		Project Name	Dougl	as Aircraft		
RILLING	Quate METHO	mary I DD(S)	nvesti	gations		DRILL BIT (S) SIZE		•				
⊅EPTH TC	Earth	Probe				1.5 inch	es E	Project Number _	21400	TOTAL DEPTH		
	Not E	ncount	ered			<u>-</u>		Not Surveye	ed	DATE COMPLETED	10 feet	
LOGGED	BY J. Kni	øht						4/14/97		DATE COMPLETED	4/14/97	
S/	MPLES	3	Denth		LieCe	Mimaell	2011	DESCRIPTION AND	DDII I ING	DEMARKS		
Driven Recover Collecte	Penetritor Resistence (blows/bod)	Read Spe (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color	SOIL	DESCRIPTION AND	DRILLING	KEWAKKS		
	\$5.5	125		************	 		fill					
****			-				-				-	

▓⋘	8	5.6	-		CL	10YR 3/2	- Silty CLAY: very dark	gray brown, stiff, moist				
	4		-				~				-	
			5-			10YR 3/3 2.5Y 5/6	mottled dark brown and	l light olive brown, firm	ı, moist		-	
						2.5Y 5/6	_					
					T			wn, some fine sand, firm	n moist			
					ML	2.5Y 4/4	Clayey SILT: onve brov	wn, some the sand, thin	ii, iiioist		-	
****	ן ן	6.2					-				-	
	8	0.2	10-				1-inch lense of fine gra	vel	.,			
			"				<u>.</u>				-	
							- Boring terminated at 10) feet.			-	
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ORING		CATIO	on 2. Tool :	Storag	e Vard				Boring Name —	2BB-2	2-6	
RILLIN	NG (COMP	NV				DRILLER				las Aircraft	
"LLIN	Q NG N)uate METHO	rnary I	nvesti	gations		Joe Abr DRILL BIT (S) SIZE		Project Name			
	E	Carth	Probe				1.5 inch	es	Project Number ELEVATION	97400	TOTAL DEPTH	
ъPTH .	TO N	VATE	count	ered					Not Surveye	d	10	feet
OGGE	DB'	Y							DATE STARTED 4/14/97		DATE COMPLETED	4/97
151	SAN	. Kni	giit			ſ			4/14/2/		1	
Recovers	Coffected	Perseration Resistence (blows/loof)	Head Spece Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color	SO	IL DESCRIPTION AND	DRILLING	REMARKS	
	※		5.2	-		CL	10YR 2/1	Silty CLAY: black, sti	ff, moist			- -
	***		5.6	-			10YR 3/4	dark yellow brown, ve	ery stiff, slightly moist			
				5-		ML	10YR 3/4	Clayey SILT: dark yel	llow brown, very stiff, slig	ghtly moist,	some fine sand	-
	***		5.7	1			2.5Y 4/4	olive brown, no sand				-
	**		3.7	10-						15		
				-				Boring terminated at	10 feet.			-
				15-				-				-
				-				-				-
				-				-				-
				20-				- -				-
				-				-				-
			1	25-				 -				-
								-				-
				-	-			-				
				30				-				
				35	1							
					1			-				
					1							
				40	1			-				
1		1			4							

Kennedy/Jenks Consultants

BOTING LOCATE			_			 						cirks Consultants
Area	2, Tool	Storag	e Ys	ard				Boring Name 2BB-2-7				
DRILLING COMP Quate PRILLING METH	ANY emary :	investi	gati	ons	<u>.</u>	ŀ	DRILLE	Joe Abi	ęau	Project Name	Doug	las Aircraft
Earth	OD (S) Probe						DRILL	BIT (S) SIZE 1.5 inch	,	· ·	97400	02.00
PTH TO WATE	R					 		1.0 Bich		Project Number ELEVATION Not Survey		TOTAL DEPTH 10 feet
LOGGED BY	ncount									DATE STARTED	cu	DATE COMPLETED
S. Sci	rimshir	•	T		_	1	7			4/14/97		4/14/97
Driven Recovered Coffected Peretration Resistence (plowerbod)	Head Spece Reading (pom)	Depth (feet)		Lithe	ology	USCS Log	,	Kunsell Color	SO	IL DESCRIPTION AND	DRILLING	G REMARKS
	0	-				ML	10	YR 2/2	Clayey SILT: very dar	k brown, soft, moist		
	0								some fine sand			
		5-				ML	2.5	5Y 4/3	Sandy SILT with Clay	: olive brown, fine sand	, soft, moist	-
		-					2.5	5Y 4/4	- no clay, olive brown			_
	0	-				ML	2.5	— — – 5Y 4/4	Clayey SILT: olive br	own, soft, moist		
		 10-							-			-
		-							Boring terminated at	10 feet.		-
		15-							-			- -
	•	-							-			-
		-							- -			- -
-		20-							- -			-
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BORING LO	CATIC	N Tool (Storag	e Yard				Boring Name —	2BB-2	2-8	
DRILLING	COMPA	NY				DRILLER		Project Name	Dougl	as Aircraft	
Con ILLING	Junte METHO	mary l DD(S)	nvesti	gations		Joe Abr			97400		
TH TO	<u>Carth</u>	Probe	-		i	1.5 inch	es	Project Number _ ELEVATION	2/400	TOTAL DEPTH	
1	Not E	ncount	ered					Not Surveye DATE STARTED	<u>d</u>	DATE COMPLETED	10 feet
LOGGED B	Y S. Scri	imshire	;					4/14/97		DATE COMPLETED	4/14/97
SA E E	Persetration Resistance (blows/bod)	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color	sol	L DESCRIPTION AND	DRILLING	REMARKS	
\$ 8 5 *****	122	0	_		CL	10YR 3/2	Silty CLAY: very dark	gray brown, firm, slight	ly moist		
		0	_		ML	2.5Y 3/2	Clayey SILT: dark oliv	ve brown, firm, slightly n	noist		
		II.	5-			2.5Y 4/4	olive brown, moist, so	ft]
			-				some fine sand				-
		0	10-								
-			-				Boring terminated at 1	0 feet.			
			15				-				-
-							-				-
-				-			-				-
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			30	1			 -				
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			35								
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			40) 			-				
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Quaternary Investigations	DRILLER Joe Abr DRILL BIT (S) SIZE 1.5 inch Munetil Color 10YR 3/2 10YR 3/2 2.5Y 4/3	074002.00
DRILLING COMPANY Quaternary Investigations DRILLING METHOD (S) Earth Probe PTH TO WATER Not Encountered LOGGED BY J. Knight SAMPLES PROBLEM OF PROBLEM (feet) Lithology Lithology CL CL	Joe Abr DRILL BIT (S) SIZE 1.5 inch Munecil Color 10YR 3/2	Project Name Douglas Aircraft Project Number 974002.00 ELEVATION Not Surveyed TOTAL DEPTH Not STARTED DATE STARTED A/15/97 SOIL DESCRIPTION AND DRILLING REMARKS Silty CLAY: very dark gray brown, very stiff, slightly moist very dark gray brown, abundant organic material
DRILLING METHOD (S) Earth Probe PTH TO WATER Not Encountered LOGGED BY J. Knight SAMPLES S	DRILL BIT (S) SIZE 1.5 inch Munecti Color 10YR 3/2	Project Number 974002.00 ELEVATION Not Surveyed TOTAL DEPTH DATE STARTED DATE COMPLETED 4/15/97 4/15/97 SOIL DESCRIPTION AND DRILLING REMARKS Silty CLAY: very dark gray brown, very stiff, slightly moist very dark gray brown, abundant organic material
PTH TO WATER Not Encountered LOGGED BY J. Knight SAMPLIS Language Depth (feet) Lithology USCS Log 3.7	Munetil Color 10YR 3/2 10YR 3/2	ELEVATION Not Surveyed 10 feet DATE STARTED DATE COMPLETED 4/15/97 4/15/97 SOIL DESCRIPTION AND DRILLING REMARKS Silty CLAY: very dark gray brown, very stiff, slightly moist very dark gray brown, abundant organic material
Not Encountered LOGGED BY J. Knight SAMPLIS Lithology Lithology Column 1	10YR 3/2	Not Surveyed 10 feet DATE STARTED 4/15/97 4/15/97 SOIL DESCRIPTION AND DRILLING REMARKS Silty CLAY: very dark gray brown, very stiff, slightly moist very dark gray brown, abundant organic material
J. Knight SAMPLES Leaved Lithology Lithology Lithology USCS Log A.7	10YR 3/2	SOIL DESCRIPTION AND DRILLING REMARKS Silty CLAY: very dark gray brown, very stiff, slightly moist very dark gray brown, abundant organic material
SAMPLES LIGHTON CLL	10YR 3/2	Silty CLAY: very dark gray brown, very stiff, slightly moist very dark gray brown, abundant organic material
3.7 CL	10YR 3/2	very dark gray brown, abundant organic material
5-		
5-	2.5Y 4/3	olive brown, hard, dry
		1
		decreasing organic material
4.7 ML	2.5Y 4/3	Clayey SILT: olive brown, very stiff, dry, some organic material
- -		Boring terminated at 10 feet.
-		- -
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		-
35-		
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Bori								Kem	nedy/Jenks Consultants
BORING	Area	2. Tool	Storag	e Yard				Boring Name	2BB-2-10
DRILLIN	G COMP	ANY			Ī	ORILLER Joe Abr	P 911	Project Name	Douglas Aircraft
PE ILLIN	G METH	OD (S)	.iivesti	gations	1	DRILL BIT (S) SIZE	:		974002.00
r/TH T	O WATE	Probe				1.5 inch	es	Project Number -	TOTAL DEPTH
LOGGED		ncount	ered	***				Not Surveye	DATE COMPLETED
	J. Kn	ight						4/15/97	4/15/97
_ E	Persettion Residence (bows/bot)	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color			DRILLING REMARKS
	XXX	2.6 3.0	1 1		CL	10YR 3/2	Silty CLAY: very dark	gray brown, very stiff, s	slightly moist, abundant organic material
			5-			ļ — — -	decreasing organic ma		
			-		ML	2.5Y 4/4	- Clayey SILT: olive bro	own, very stiff, slightly n	noist -
	8	3.8	-10-			2.5Y 5/4	stiff, moist	- Land	
			-				Boring terminated at 1	0 feet.	1
			15-				-]
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Borin	g L	.og		·				ACIII		enks Consultants
BORING LO			Storag	e Yard				Boring Name —	2BB-	2-11A
DRILLING	COMPA	NY			Ľ	RILLER		_	Doug	las Aircraft
DRILLING	Quate	mary l	nvesti	gations		Joe Abr	eau	Project Name —		
I	Earth	Probe				1.5 inch	es	Project Number - ELEVATION	97400	TOTAL DEPTH
EPTH TO	WATER	≀ ncount	ered					Not Survey	ed	10 feet
LOGGED B	Y							DATE STARTED 4/15/97		DATE COMPLETED 4/15/97
, sa	J. Kni MPLES	gnt								
E 2 5	Though (20 B	Depth (feet)	Lithology	USCS Log	Munsell Color	so	IL DESCRIPTION AND	DRILLING	G REMARKS
C Offer	Penetration Resistence (blows/loof	Read Sp (ppm)		mmmm						
****			_		CL	10YR 2/2	Silty CLAY: very darl	c brown, stiff, slightly me	oist	-
		3.2	_				-			-
							.			-
		3.1				2.5Y 3/3	dark olive brown, firm	n, moist		-
	'		_							
			5-			2.5Y 4/4	olive brown, very stiff	f, slightly moist		
			-			 				
			-		ML	2.5Y 5/6	Clayey SILT: light oli	ve brown, stiff, slightly i	moist	
			-							
****		2.8	-				-			-
*****			10		-	<u> </u>				
			-				Boring terminated at	10 feet.		-
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Boring						· · · · · · · · · · · · · · · · · · ·			enks Consulta	
BORING LOCAT A rea	10N 1 2- Tool	Stora	e Yard				Boring Name —	2BB-2	2-11B	
DRILLING COM Water	PANY e r Deve l	onmen	t	1	DRILLER Brian F ı	ulce	Project Name	_Doug	las Aircraft	
DRILLING MET	HOD (S)			I	DRILL BIT (S) SIZE		· ·	97400	2.00	
.PTH TO WAT	£-85, H o ER	ollow S	tem Auger		8 inches		Project Number -		TOTAL DEPTH	
Not LOGGED BY	Encount	tered					Not Survey	ed	50 f	eet
	Knight		,i				3/7/97		3/7/	97
Collected Secondary Second	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color		L DESCRIPTION AND	DRILLING	G REMARKS	
∞	1		thinnin			Gravel Fill				_
3 4 4 5 7	18.7	-		CL	7.5YR 3/2	CLAY: dark brown, m	inor silt, slightly moist,	firm, slightly	y plastic	-
**************************************		-				-				•
4 11 15	6.2	10-		ML	10YR 5/4	Sandy Clayey SILT: y	ellowish brown, slightly	moist, stiff,	moderately plastic	
		-		SM	10YR 5/6	Silty SAND: yellowis	h brown, fine, slightly m	oist, trace o	f gravel, medium dense	
9		15				- -				
5 8 13	6.2	20								
		25		SP	10YR 5/6	SAND: yellowish bro medium dense	wn with gray mottles, fit	ne, poorly so	orted, with silt, dry to sligh	ntly moist,
26				СН	10YR 4/6	- CLAY: yellowish bro	wn with orange mottles,	dry, hard, v	ery plastic when wet	
26 28 38	2.0	30		SM	10YR 4/6	Silty SAND: yellowis	h brown, fine, slightly n	noist, very d	ense, trace of gravel, trace	of mica
9 10 26		35				-				
				sw	2.5Y 6/4	SAND: light yellowis of silt, dry, dense	h brown, fine, trace of n	nedium, mic	a, mafic grains, well grade	ed, trace
8 10 13	14.5	40		ML	2.5Y 5/2	Clayey SILT: grayish	brown with orange mott	lles, dry to s	lightly moist, moderately	plastic

BORING L									4DD 4	11D
	Area 2	- Tool S	Storag	e Yard				Boring Name ——	2BB-2	
DRILLING	COMPA	NY			Ţ	DRILLER Brian F i	ulce	Project Name	Dougl	as Aircraft
DRILLING	METHO	Develo DD (S)				DRILL BIT (S) SIZE		·	97400	
EPTH TO	CME-	85. Holi	low St	em Auger	1	8 inches		Project Number — ELEVATION		TOTAL DEPTH
H TO ויושק. [WATER Not E	: ncounte	red					Not Surveye	d	50 feet DATE COMPLETED
LOGGED E	Y					-		DATE STARTED 3/7/97		3/7/97
SA	ven K	night								
c & #	500	30 5	Depth (feet)	Lithology	USCS Log	Munsell Color	SO	IL DESCRIPTION AND	DRILLING	G REMARKS
Driven Recovered Collected	Penein Resista (blores/	Head Spa Reading (ppm)					AV	N. americals because with a	range mott	les, dry to slightly moist, very stiff,
****					ML	2.5Y 5/2	_ moderately plastic	iea): grayish brown willi c	mange mou	les, dry to singility moist, very still,
			. 1				· ·			
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***			-				-			-
****				ШШШШ	 -	 				
****			45-		SP	2.5Y 7/2	SAND: light gray, fin	e, subrounded, poorly gra	ded, trace o	of silt, mafic grains, dry to slightly
			40		1	Ì	Hoist, very delise			-
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***	j		-		1					
	18 30 32	6.2	-		1		-			
*****	32	0.2	50 -		!	ļ				
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						1	Boring terminated at	50 feet.		
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BORING L			Storag	e Yard				Boring Name —	2BB-2	2-12	<u> </u>
DRILLING	COMP	ANY			D	RILLER	P911	Project Name	Doug	las Aircraft	
LLING	METH	DD(S)	ilivesti	ENTIONS	D	Joe Abr		_	97400		
rH TO	WATE	Probe				1.5 inch	es	Project Number -		TOTAL DEPTH	10.6-4
LOGGED I	Not E	ncount	ered					Not Surveyor DATE STARTED	<u>ed</u>	DATE COMPLETED	10 feet
	J. Kni	ght	····					4/15/97			4/15/97
<u> </u>	Penetration TH Resistence (blows/bod)	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color	soi	L DESCRIPTION AND	DRILLING	G REMARKS	
	XXXX	1.8			CL	2.5Y 3/1	Silty CLAY: very dark	gray, firm, moist			-
			5-		ML	2.5Y 5/6 2.5Y 4/4	Clayey SILT: light oliv	ve brown, stiff, slightly r	moist		-
	8	2.2	10								
-			-				Boring terminated at 1	0 feet.			-
			15-				-				-
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			20								<u>.</u>
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Boring Log		Kennedy	Jenks Consultants
BORING LOCATION Area 2, Tool Storage Yard		Boring Name2B	B-2-13
DRILLING COMPANY	DRILLER Joe Abreau		uglas Aircraft
Quaternary Investigations PalLLING METHOD (S)	DRILL BIT (S) SIZE	7 -	1002.00
Earth Probe	1.5 inches	ELEVATION	TOTAL DEPTH 10 feet
Not Encountered LOGGED BY		Not Surveyed DATE STARTED	DATE COMPLETED
J. Knight	T	4/15/97	4/15/97
Depth (feet) Lithology USCS Log		OIL DESCRIPTION AND DRILL	LING REMARKS
CL 0.4	2.5Y 3/2 Asphalt, 8" Silty CLAY: very da	rk gray brown, stiff, slightly mois	t -
5-100000 ML	2.5Y 5/6 Clayey SILT: light o	live brown, very stiff, slightly mo	ist -
0.7	2.5Y 4/4 olive brown, stiff, sl	ightly moist	
15-	Boring terminated a	t 10 feet.	
20-			
25-			
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35-			
40-	-		

Bori									IXCIII	iled y/o	enks Consultants
BORING	A	rea 2	Tool	Storag	e Yard				Boring Name —	2BB-2	2-14
DRILLIN	iG C	OMPA	NY		gations		DRILLER Joe Abr	v au	Project Name	Doug	las Aircraft
DRILLIN	IG M	ETHO	D (S) Probe	arvest.	<u> </u>		DRILL BIT (S) SIZE 1.5 inch	:	} -	97400	
.∕TH 1	ro w	ATER					1.5 1161	<u>co</u>	Project Number -		TOTAL DEPTH
LOGGET	BY		count	ered					Not Survey DATE STARTED	ea	DATE COMPLETED
	J.	Kni _j	ght				1	· · · · · · · · · · · · · · · · · · ·	4/15/97		4/15/97
١١١		Resistence (Blows/boot)	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Cotor	so	IL DESCRIPTION AND	DRILLING	G REMARKS
	***			5-		CL — — - ML	10YR 3/3 10YR 4/4 2.5Y 5/6		dark brown and dark yell ——————————————————————————————————		stiff, slightly moist
			0.0	10-			2.5Y 5/4	light olive brown, sor	ne fine sand		
-				-				Boring terminated at	10 feet.		
				15-				-			· ·
-				20-				-			
-				25							
-				30							
				35							
				40				-			
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			Log						110111	redy/Jenks Consultants			
во	UNG L	OCATI	ion 2, Tool :	Storag	e Yard				Boring Name ——	2BB-2-15			
DRI	LLING	COM	PANY ernary l			Ι	ORILLER Joe Abr	rali	Project Name	Douglas Aircraft			
D.R.	LLING	METH	(S) GOI	ili vesti	Eatlons	ī	ORILL BIT (S) SIZE			974002.00			
	TH TO	WATE	Probe				1.5 HICH	es	Project Number _ ELEVATION Not Surveye	TOTAL DEPTH			
LOX	GED		Encount	ered					DATE STARTED	DATE COMPLETED			
<u>_</u>		J. Kr	ight	1	<u>,</u>	T	T		4/15/97	4/15/97			
Driven	Collected	2 8 Q	Head Space Reading (pom)	Depth (feet)	Lithology	USCS Log	Munseli Color	SO	IL DESCRIPTION AND	DRILLING REMARKS			
		*				CL	10YR 3/2	Silty CLAY: very darl	k gray brown, stiff, slight	ly moist			
		Ž		-			10YR 3/3 10YR 4/4		nd dark yellow brown				
				5-		ML	2.5Y 5/6	Clayey SILT: light olive brown, very stiff, slightly moist					
		X		10			2.5Y 4/4	olive brown, trace of	fine sand	-			
				-				- Boring terminated at	10 feet.				
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Borin								- Keni	reuy/Jenks Consultants
BORING LO			Storag	e Yard				Boring Name	2BB-2-16
DRILLING	COMPA	NY	_			DRILLER		Project Name	Douglas Aircraft
DRILLING	Quate METHO	IMATY I DD (S)	<u>Investi</u>	gations	1	Joe Abr DRILL BIT (S) SIZE		-	974002.00
I	Earth WATER	Probe				1.5 inch	es	Project Number _	TOTAL DEPTH
ľ	Not E	ncount	ered					Not Surveyed	DATE COMPLETED
LOGGED B	i Y J. Kni	ght						4/15/97	4/15/97
Driven Recovered Collected 57	Penetration (2) Resistence (3/cms/bod)	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS	Munselt Color			DRILLING REMARKS
		14.0	-		CL	10YR 2/1	Asphalt, 3" Silty CLAY: black, sti	ff, moist	-
			5-			10YR 3/2 10YR 4/6		y brown and dark yellow	
			-		ML	2.5Y 5/6	Clayey SILT: light oli	ve brown, trace of fine sa	and, stiff, slightly moist - -
			10-		ML	2.5Y 5/6	Sandy SILT: light oliv	e brown, fine sand, some	e clay, stiff, slightly moist
-			-				Boring terminated at 1	10 feet.	-
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t. 			-				_		-
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Boring Log				IXCIII	redy/Jenks Consultants				
BORING LOCATION Area 2, Tool Storas	a Vard		·	Boring Name —	2BB-2-17				
DRILLING COMPANY		DRILLER		Project Name	Douglas Aircraft				
Quaternary Invest	igations	Joe Abr			974002.00				
Earth Probe		1.5 inch	es	Project Number — ELEVATION	TOTAL DEPTH				
Not Encountered				Not Surveyed 10 feet DATE STARTED DATE COMPLETED					
LOGGED BY J. Knight				4/15/97 4/15/97					
SAMPLES Department of present of	Lithology USC	S Munsell Color	SOI	L DESCRIPTION AND	DRILLING REMARKS				
2.4	cr	10YR 3/1	Asphalt, 3" Silty CLAY: very dark	gray, firm, moist					
2.2	ML	2.5Y 4/4	Clayey SILT: olive bro	own, stiff, slightly moist	1				
51		2.5Y 5/6	light olive brown trace of fine sand						
0.9	ML	2.5Y 5/4	Sandy SILT: light oliv	e brown, fine sand, firm,	moist				
20 25 30 35			Boring terminated at 1	O feet.					

		Log								circs Consultants
BORING	A res	ion 2. Tool	Storag	e Yard				Boring Name ——	2BB-2	2-18
DRILLIN	G COM	PANY				DRILLER		Project Name		as Aircraft
DO ILLIN	Quat G METI	ernary IOD (S)	Investi	gations		Joe Abr DRILL BIT (S) SIZE	,	-		
/TH T	Eart	h Probe				1.5 inch	es	Project Number	97400	TOTAL DEPTH
	Not !	er Encount	ered					Not Surveye	d	10 feet
LOGGED	ВҮ J. К ı	nioht						DATE STARTED 4/15/97		DATE COMPLETED 4/15/97
2	SAMPLES E E E E	3 gg	Depth (feet)	Lithology	USCS Log	Munsell Color	SO	IL DESCRIPTION AND	DRILLING	
		1.3	-		CL	10YR 3/2	Asphalt, 3" Silty CLAY: very dark	gray brown, firm, moist		-
	×	2.0	-		ML	2.5Y 4/4	Clayey SILT: olive bro	own, stiff, slightly moist		-
			5-		ML	2.5Y 5/4	Sandy SILT: light oliv	ve brown, fine sand, firm,	moist, som	e clay
			-		ML	2.5Y 5/4	- Clayey SILT: light oli	ve brown, firm, moist		-
	8	1.5	10-				increasing clay			
			-				Boring terminated at	10 feet.		
			15-				- -			-
			20-				-			1
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Boring							1101111	edy/Jenks Consultants				
BORING LOCAT	TON 2 Screen	Mate	rial Storage Y	ard			Boring Name	2BB-2-20				
DRILLING COM	PANY			į L	ORILLER		Project Name	Douglas Aircraft				
Quantilling MET	ternary I HOD (S)	nvesti	gations	-	Joe Abro	:xu		974002.00				
Eart PTH TO WAT	h Probe				1.5 inche	<u>es</u>	Project Number	TOTAL DEPTH				
Not LOGGED BY	Encount	ered					DATE STARTED DATE COMPLETED					
J. Ki	night	,			,		4/14/97	4/14/97				
Coffected Coffected Secondary	3 2 2	Depth (feet)	Lithology	USCS Log	Munecil Color	so	IL DESCRIPTION AND	DRILLING REMARKS				
	6.8	1		CL	10YR 2/1	Silty CLAY: black, fir	m, moist					
	6.8	-			10YR 2/2	very dark brown, stiff	slightly moist	7				
		5-			2.5Y 4/4	olive brown, very stif	f, slightly moist					
	6.9	-		ML	2.5Y 4/4	grades to Clayey SIL	Γ: olive brown, some fine	sand, stiff, slightly moist				
-		10-				Boring terminated at	10 feet.	-				
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		15				-		-				
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BORING LOCA	ATION	- 1/-4-	rial Stames V	a md			Boring Name —	2BB-2-21				
DRILLING CO	MPANY	o winte	rial Storage Y	I I	ORILLER	9911	Project Name	Douglas	ille i			
Qu LLING ME	ETHOD (S)	investi	gations		Joe Abr	tau	1	974002.0				
Eat TH TO WAعما	rth Probe ATER			<u>.</u>	1.5 inch	es	Project Number -	TOTA	AL DEPTH			
Not LOGGED BY	t Encount	ered					Not Surveyed 10 feet DATE STARTED DATE COMPLETED					
S. S	Scrimshin	e			T	· · · · · · · · · · · · · · · · · · ·	4/14/97		4/14/97			
Recovered Coffected Prestration	Resistence (blows/tool) (5) Head Space Residing (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color	SOIL DESCRIPTION AND DRILLING REMARKS						
	0	1 1		ML	10YR 2/2	-	k brown, fine sand, firm,	slightly moist	-			
	0	5-		 ML	10YR 5/4	some clay	— — — — — — — — — — — — — — — — — — —	t, slightly moist				
	0	-			2.5Y 4/4	olive brown			-			
		10				- Boring terminated at	10 feet.					
-		15				- -			-			
		20-				- - - - - - -			-			
		25				- - -			-			
		30										
		35							-			
		40	-			- - -			-			

Boring I								nedy/ochris Consultants
BORING LOCATIO		Mate	rial Storage	Yard			Boring Name —	2BB-2-22
DRILLING COMPA	NY				DRILLER		Project Name	Douglas Aircraft
Quate	mary I	nvesti	gations		Joe Abr DRILL BIT (S) SIZE		-	
Earth TH TO WATER	Probe				1.5 inch	es E	Project Number -	TOTAL DEPTH
	ncounte	ered					Not Survey	DATE COMPLETED
J. Kni	ght						4/11/97	4/11/97
Percental Collected SS Percental Collected SS Percental Collected SS Percental Collected Collected SS Percental Collected SS Percental Collected SS Percental Collected SS Percental Collected SS Percental Collected SS Percentage SS Percentag	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color		DESCRIPTION AND	DRILLING REMARKS
	7.2	-		CL	10YR 3/2	Asphalt, 4 ⁿ Silty CLAY: very dark	brown, firm, moist	<u>-</u>
	7.8	-				-		
	7.0	-		<u>_</u>	2.5Y 4/4	olive brown, firm, mois		
		5-		ML	2.5Y 4/4	Sandy SILT: olive brov		ist -
	7.8	-		-		some clay, stiff, slightly	y moist 	
		10-		ML	2.5Y 4/4	Clayey SILT: olive bro	wn, stiff, slightly moist	
	7.8	15-		ML	2.5Y 5/6	Sandy SILT: light olive	brown, fine sand, stiff	f, slightly moist
	7.9	20-			2.5Y 6/6	Silty SAND: olive yell	ow, fine, loose, dry	
	8.2	25			5Y 7/4	pale yellow, loose, slig	chtly moist	-
-			-			Boring terminated at 2	26 feet.	
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DELLIAN OBSERVANCE DOUBLETTO SEE Project Number 974002.00	BORING LOCATIO		WP Su	bstation				Boring Name	_2BB-2	2-23
DELILIBRICO SIZE FITO WATER WATER COUNTRY NOT SURVEYS NOT SURVEYS NOT SURVEYS DATE COMPLETED AT 1097 Applail, 4* Soll DESCRIPTION AND DRILLING REMARKS Applail, 4* Sol	DRILLING COMPA	ANY						_	Doug	las Aircraft
Earth Probe	Quate:	od (S)	nvesti	gations		DRILL BIT (S) SIZE				
Not Encountered LOSCED BY LOSCED BY LOSCED BY A JOST SOIL DESCRIPTION AND DRILLING REMARKS SOIL DESCRIPTION AND DRILLING REMARKS Asphal, 4* Silty CLAY: dark brown, firm, moist TOWN 3.7 SOIL DESCRIPTION AND DRILLING REMARKS Asphal, 4* Silty CLAY: dark brown and yellow brown 10YR 3.7 10YR 3.7 10YR 3.7 10YR 3.7 10YR 3.7 10YR 3.7 2.5Y 4/3 Silty SAND: light olive brown, fine, loose, moist 7.7 2.5* SOIL DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS Asphal, 4* Silty CLAY: dark brown, fine, and, stiff; slightly moist mottled dark brown and yellow brown olive brown, very stiff, moist 7.1 10* Soll DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS Asphal, 4* Silty SAND: light olive brown, fine, loose, moist 7.7 2.5* Soll DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS Asphal, 4* Silty SAND: light olive brown, fine, loose, moist TOWN AND DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS Asphal, 4* Silty SAND: light olive brown, fine, loose, moist TOWN AND DESCRIPTION AND DRILLING REMARKS TOWN ASPHAL Soll DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS TOWN ASPHAL Soll DESCRIPTION AND DRILLING REMARKS TOWN ASPHAL Soll DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS Soll DESCRIPTION AND DRILLING REMARKS TOWN ASPHAL Soll DESCRIPTION AND DRILLING REMARKS TOWN ASPHAL Soll DESCRIPTION AND DRILLING REMARKS SOLL DESCRIPTION	Earth	Probe				1.5 inch	es	Project Number	3/400	TOTAL DEPTH
DATE STARTED DATE	Not E	ncount	ered					Not Surveye	·d	26 feet
SOIL DESCRIPTION AND DRILLING REMARKS 6.2 5.9 10YR 4/4 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/6 7.1 10 ML 2.5Y 5/6 Sandy SILT: light olive brown, fine sand, firm, moist 7.2 15 SM 2.5Y 6/4 Silty SAND: light yellow brown, fine, loose, moist 5Y 7/4 pale yellow, loose, slightly moist Boring terminated at 26 feet.	LOGGED BY	labé								DATE COMPLETED 4/10/97
6.2 10YR 3/3 10YR 4/4 dark yellow brown, some fine sand, stiff, slightly moist mottled dark brown and yellow brown 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 10YR 3/3 2.5Y 4/3 olive brown, very stiff, moist 7.1 10 7.2 15 ML 2.5Y 5/6 Sandy SILT: light olive brown, fine sand, firm, moist 7.3 20 3 Silty CLAY: dark brown, firm, moist 8 Silty SAND: light yellow brown, fine, loose, moist 7.7 25 5Y 7/4 pale yellow, loose, slightly moist Boring terminated at 26 feet.	SAMPLES SAMPLES SAMPLES	\$	Depth (feet)	Lithology	USCS Log	Munsell Color	sol		DRILLING	
6.2 5.9 10YR 4/4 dark yellow brown, some fine sand, stiff, slightly moist mottled dark brown and yellow brown 7.1 10 10 10 10 10 10 10 10 10 10 10 10 10	A S S S S S S S S S S S S S S S S S S S	126					Apphalt 4"			
5 10YR 3/3 mottled dark brown and yellow brown 7.1 10		6.2	-		CL	10YR 3/3	Silty CLAY: dark brov	vn, finn, moist		1
7.1 10 10 10 10 10 10 10 10 10		5.9	-			10YR 4/4	dark yellow brown, so	ome fine sand, stiff, slight	ly moist	-
7.1 10- 7.2 15- ML 2.5Y 5/6 Sandy SILT: light olive brown, fine sand, firm, moist 7.3 20- SM 2.5Y 6/4 Silty SAND: light yellow brown, fine, loose, moist 7.7 25- SY 7/4 pale yellow, loose, slightly moist Boring terminated at 26 feet.			5-			10YR 3/3 10YR 5/6	mottled dark brown as	nd yellow brown		
7.3 20 SM 2.5Y 6/4 Silty SAND: light yellow brown, fine, loose, moist 7.7 25 SM 5Y 7/4 pale yellow, loose, slightly moist Boring terminated at 26 feet.		7.1	10-			2.5Y 4/3	- olive brown, very stiff	f, moist		-
7.3 20 SM 2.5Y 6/4 Silty SAND: light yellow brown, fine, loose, moist 7.7 25 SM 5Y 7/4 pale yellow, loose, slightly moist Boring terminated at 26 feet.	-		-				- - 			
7.7 25- 54 pale yellow, loose, slightly moist Boring terminated at 26 feet.		7.2	15		ML	2.5Y 5/6	Sandy SILT: light oliv	ve brown, fine sand, firm,	, moist	•
Pale yellow, loose, slightly moist Boring terminated at 26 feet.		7.3	20		SM	2.5Y 6/4	Silty SAND: light yel	— — — — — — — — — — — — — — — — — — —	 noist	
		7.7	25			5Y 7/4	pale yellow, loose, sli	ghtly moist		-
							Boring terminated at	26 feet.		-
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35-			35	-			<u> </u>			-
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Boring	<u>g L</u>	og						Kenn	leuy/Je	enks Consi	inants
BORING LO			Mate	rial Storage Y	ard			Boring Name ——	2BB-2	-24	
DRILLING C	COMPA	NY			1	DRILLER		Project Name	Dougl	as Aircraft	
PEDILLING N	METHO	D(S)	nvesti	gations		Joe Abr DRILL BIT (S) SIZE			97400		
► _rTH TO V	WATER	Probe				1.5 inch	es	Project Number —		TOTAL DEPTH	10.64
LOGGED BY		counte	red					Not Surveye DATE STARTED	d	DATE COMPLETED	10 feet
J.	. Knig	ght				1		4/10/97			4/10/97
	Penetration Resistence (Moreshoot)	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color		IL DESCRIPTION AND	DRILLING	REMARKS	
		5.6	1 1		CL	2.5Y 4/4	Asphalt, 4" Silty CLAY: olive bro	wn, stiff, slightly moist			-
		6.3	-			10YR 3/6	dark yellow brown, ve	ery stiff, slightly moist			
			5- - -		ML	2.5Y 4/4	Sandy SILT: olive bro some clay	own, fine sand, firm, mois	t		-
		7.2	10-			2.5Y 4/4	Silty CLAY: of ive bro	wn, stiff, moist			
			15-				Boring terminated at	10 feet.			
-			25								
			30								-
			35	-							
			40	-			-				-

BORING LOCATION	ON									ADD 1	25			
Area	2. Scrap	Mate	rial S	Stor	age Y	ard .	2011 1 50		Boring Name —	2BB-2				
DRILLING COMPA	ANY					li ii	ORILLER Joe Abi	reau	Project Name	Doug	las Aircraft			
Quate	OD (S)	11 (63(1)					Joe Abi	3		97400				
TH TO WATE	Probe						1.5 inch	ies	Project Number — ELEVATION		TOTAL DEPTH			
Not E	ncounte	ered							Not Surveyed 10 feet DATE STARTED DATE COMPLETED					
LOGGED BY J. Kni SAMPLES	ght								4/10/97		4/10/97			
Driven Recovered Collected Prestration Resistance (biovertical)	Head Space Reading (ppm)	Depth (feet)	î.	itholo _l	BY	USCS Log	Munsell Color	SOI	SOIL DESCRIPTION AND DRILLING REMARKS					
	4.9 6.8	1 1 1				ML	2.5Y 4/4	Clayey SILT: olive bro	own, firm, moist					
		5-				 	10YR 4/3 10YR 4/6	mottled dark brown ar	nd dark yellow brown, vei 	ry soft, moi — — —	st			
	6.3	10-	Ш	$\coprod \coprod$		ML	2.5Y 4/4	Sandy SILT: olive bro	wn, fine sand, trace of cla	ıy, firm, mo	pist			
		15-						Boring terminated at 1	10 feet.					
		20-						- - - - - - - - -			-			
-		25 -						-			-			
-		30-									-			
		35-												
-		40- -									-			

		ıg L							Ikciii	ledy/Jenks Co	Isuituires
BORI		OCATIC A reg 2		Mate	rial Storage Y	ard			Boring Name —	2BB-2-26	
DRILI	ING	COMPA	NY				DRILLER Joe Ahr	e911	Project Name	Douglas Aircra	ft
E-FILL	ING	METHO	D (S)	II v esti:	gations		Joe Abr	- Luu	_	974002.00	
PTIدر	н то	WATER	Probe			1	1.5 inch	es	Project Number	TOTAL DEPTH	10.5.4
LOGO			icounte	red					Not Surveye DATE STARTED	DATE COMPLET	10 feet
		J. Kni MPLES	ght	- 1			<u> </u>		4/10/97		4/10/97
Driven	3	Penetration Resistence (blows/foot)	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color	so	IL DESCRIPTION AND	DRILLING REMARKS	
			4.9	1		ML	2.5Y 4/3	Clayey SILT: olive br	own, firm, moist		-
	8			5 -		·	2.5Y 3/3	dark olive brown, soft	t, moist		-
			6.5	-10-			2.5Y 4/2	dark gray brown, soft	, moist		-
				-				Boring terminated at	10 feet.		
-				15-				- -			-
				-				- - - -			-
-				20-				-			-
				25							-
											-
				30				-			-
				35				-			-
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L								-			_

Kennedy/Jenks Consultants

Boring Log			120111	ledy/Jenks Consultants
BORING LOCATION Area 2, Scrap Material Storage Yan			Boring Name -	2BB-2-27
DRILLING COMPANY	DRILLER Joe Abi	reali	Project Name	Douglas Aircraft
Quaternary Investigations PRILLING METHOD (S)	DRILL BIT (S) SIZI	r e	=	974002.00
Earth Probe	1.5 inch	nes E	Project Number _	TOTAL DEPTH
Not Encountered	 		Not Surveye DATE STARTED	ed 10 feet DATE COMPLETED
LOGGED BY J. Knight			4/10/97	4/10/97
SAMPLES Depth (feet) Land 19	USCS Munsell Log Color	SOII	L DESCRIPTION AND	DRILLING REMARKS
888 556	L 10YR 4/4	Clayey SILT: dark yell	ow brown, firm, moist	
7.2	10YR 4/4 10YR 3/2	mottled dark yellow br	own and very dark gray	brown, soft, moist
5.6	2.5Y 4/4	olive brown, stiff, mois	st	
- 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10		- Boring terminated at 1	0 feet.	
- 15-		-		
- - - -		-		
20-		- -		
- -		-		
-		-		
25-				
30-		-		
		- - -		
35-		-		
40-		<u> </u> - - -		
		-		

Boring Log				IXCIII	cuj/o	enks Consu	Itants		
BORING LOCATION Area 2, Scrap Material Store	aga Vord		1	Boring Name ——	2BB-2	2-28			
DRILLING COMPANY	i.	DRILLER		Project Name		as Aircraft			
Quaternary Investigations		Joe Abr			97400				
Earth Probe		1.5 inch	es I	Project Number <u> </u>		TOTAL DEPTH			
Not Encountered				Not Surveye	<u>d</u>	DATE COMPLETED	10 feet		
LOGGED BY J. Knight			D.	4/10/97 4/10/97					
SAMPLES PARTICIPATION PARTICIPATIO	USCS Log	Munselt Color	SOIL	DESCRIPTION AND	DRILLING	REMARKS			
	CL	10YR 2/2	Silty CLAY: very dark b	rown, some gravel lens	es, firm, m	oist	-		
4.6		10YR 3/3	dark brown, soft, moist				-		
			- Boring terminated at 10	feet.			-		
15-			- -				-		
							-		
20-									
25-			-				•		
30-							-		
35-			-				-		
			-						
40-							-		

Boring I							Kem	icu y/o	enks Consultants
BORING LOCATION A read	ON 2. Scrar	Mate	rial Storage Ya	ard			Boring Name —	2BB-2	2-29
DRILLING COMP.	ANY			ļ I	DRILLER	2001	Project Name	Doug	las Aircraft
RILLING METH	OD(S)	nvesti	gations	I	Joe Abr	cau	=	97400	
PTH TO WATE	Probe				1.5 inch	es	Project Number -		TOTAL DEPTH
Not E	ncount	ered					Not Surveyed	ed	DATE COMPLETED
J. Kni	ght			-			4/10/97		4/10/97
Driven Recovered Collected Sessionce (bloveshoot)	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color	SOI	L DESCRIPTION AND	DRILLING	G REMARKS
	7.5	-		CL	10YR 3/2	Silty CLAY: very dark	gray, firm, moist		-
	8.2	-			10YR 3/1	- dark brown, firm, moi -			4
		5-			10YR 4/4 10YR 3/3	mottled dark yellow b	rown and dark brown, so	oft, moist	
	4.9	10-							
		 		ML	2.5Y 4/4	Clayey SILT: olive bro	own, stiff, moist		
		_				- Boring terminated at 1	1 feet.		
		15-							
-		-				-			
-		20-	i			-			-
-		25-				- - -			- -
						-			-
		30				-			-
-									-
		35							
		40	-			<u>.</u> -			-
				<u> </u>		-			-

			J0g						Kem	iedy/Jenks Consultants
		OCATION A PER 1	2, Scra	p Mate	erial Storage Y	ard			Boring Name	2BB-2-30
	ING (COMP. Quate	ANY mary :		gations		DRILLER Joe Ab	reau	Project Name	Douglas Aircraft
DRILLI	ING I	METH Earth	OD (S) Probe			i	DRILL BIT (S) SIZI 1.5 inch	F	Project Number _	974002.00
.PTH	TO	WATE	R ncount			<u>'</u>			ELEVATION Not Surveye	TOTAL DEPTH
LOGGE	ED B			****					DATE STARTED 4/10/97	DATE COMPLETED 4/10/97
18		MPLES	3	Depth		USCS	Munsell			
Driven Recover	Collecte	Penetratio Resistence (blown/bc	Head Spe Reading (ppm)	Depth (feet)	Lithology	Log	Color	SO	IL DESCRIPTION AND	DRILLING REMARKS
	×			-		ML	10YR 3/4	Clayey SILT: dark yel	low brown, stiff, slightly	moist
	***		8.3	-		CL	10YR 3/2	- Silty CLAY: very dark	gray brown, firm, moist	
				5-			2.5Y 4/4 10YR 3/3	mottled olive brown a	nd dark brown, firm, moi	st
				-		ML	2.5Y 5/4	Clayey SILT: light oli	ve brown, firm, moist, soi	me lenses of organic material
	**		5.5	10-		CL	2.5Y 4/4	Silty CLAY: olive bro	wn, stiff, moist	-
				_				- Boring terminated at 1	0 feet.	-
				15-				-		
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				_				- -		-
-				20-				<u>-</u> -		-
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				35-				- -		-
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BORING LOCATIO	JOB_							ADD /	2 21
A rea 2	LAD	WP Su	bstation		DRILLER		Boring Name 2BB-2-31		
Quate PRILLING METHO	mary I	nvesti	gations		Joe Abr	eau	Project Name —		las Aircraft
Earth	Probe				DRILL BIT (S) SIZE 1.5 inch	es	Project Number _ ELEVATION	97400	
DEPTH TO WATER	₹ ncounte	ered					Not Surveye	ed	TOTAL DEPTH 26 feet
LOGGED BY							DATE STARTED 4/11/97		DATE COMPLETED 4/11/97
J. Kni	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color	so	IL DESCRIPTION AND	DRILLING	
Diversity (1999)	6.9	-		CL	10YR 2/1	Silty CLAY: black, fir	rm, moist		-
	7.5	-			10YR 3/2	very dark gray brown	, stiff, moist		
		5-			2.5Y 5/6	light olive brown, stif	f, slightly moist		
		_		ML	2.5Y 6/4	- Sandy SILT: light yell -	low brown, fine sand, firm	m, slightly r	moist - -
	7.4	10-			2.5Y 5/4	light olive brown, dec	creasing sand, trace of cla	у	
	7.8	15-				- - -			
	7.5	20-		SM	2.5Y 6/6	Silty SAND: olive ye	llow, fine, loose, dry		
	7.6	25-			5Y 7/2	light gray, medium de	ense, slightly moist		
-		-				Boring terminated at	26 feet.		
.		30				-			
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Boring							12011	nedy/Jenks Consultants		
BORING LOCA Are	TION 2 2, LAD	WP Su	bstation				Boring Name 2BB-2-32			
DRILLING COL					DRILLER Joe Abr	eau	Project Name	Douglas Aircraft		
DRILLING ME	THOD(S) th Probe				DRILL BIT (S) SIZE 1.5 inch		-	974002.00		
TH TO WA	TER Encount				1.0 111011		Project Number ELEVATION Not Surveye	red TOTAL DEPTH		
LOGGED BY		ereu					DATE STARTED 4/11/97	DATE COMPLETED 4/11/97		
J. K	Knight ES	1								
Collected Prestrains	(bowerhood) Head Specific (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Colar			O DRILLING REMARKS		
	7.0	_		CL	10YR 3/1	Silty CLAY: very dark	gray, stiff, slightly mois	st		
	8.0	5-		ML	2.5Y 4/4	Clayey SILT: olive bro	own, some fine sand, stif	ff, slightly moist		
	8.0	10-				-				
	7.9	15		ML	2.5Y 5/4	-	e brown, fine sand, stiff,	f, slightly moist		
	7.8	20		SM	5Y 6/3	Silty SAND: pale oliv	e, fine, loose, dry			
	7.8	25				slightly moist				
-		30	- -			Boring terminated at	26 feet.			
						-				
•		35				-				
		40	 			-				
			-							

Boring													IXCIII	icuj/o	enks Consi	artants
BORING LOC		N LAD	WD S.	he	tati	on						-	Boring Name ——	2BB-	2-33	
DRILLING C	OMPA	NY							Į.	RILLER	4 h		Project Name	Doug	las Aircraft	
"ILLING M	IETHO	mary I	nvesti	gat	tion	5			T.	Joe A	SIZE		*	97400		-
Ea DEPTH TO W	arth i	Probe								1.5 is	nches		Project Number ELEVATION		TOTAL DEPTH	
N	ot Er	count	ered										Not Surveye DATE STARTED	<u>d</u>	DATE COMPLETED	26 feet
	Kni	ght									.,		4/11/97			4/11/97
Driven Recovered Collected	PLES (powerfoot)	Head Spece Reading (ppm)	Depth (feet)		Liti	holog	87		USCS Log	Munsell Color		SO	IL DESCRIPTION AND	DRILLING	G REMARKS	
		5.6	-					!	ML	10YR 3/2	2	Clayey SILT: very dar	k gray brown, stiff, sligh	tly moist		-
		7.1	-						CL	10YR 3/	6		ow brown, firm, moist			
			5-	${ m I\hspace{1em}I}$	\prod	\prod			ML _	2.5Y 4/4	4 🗼		own, stiff, slightly moist,			
				$\ \ $	Ш	Ш]]]	ML	2.5Y 5/4	4	grades to Sandy SILT	light olive brown, fine s	and, stiff, s	lightly moist	_
			-								-	firm, moist			- 	- -
		6.3	-					3	- — - CL	2.5Y 4/4	_ T	grades to Silty CLAY:	olive brown, firm, moist	t.		
			10-						CL	2.51 4/-	· -	gades to birty exact.				-
			-													4
		7.2	15-								Ī	very stiff, moist				
			-								- -				- 	
		6.8	20						ML	2.5Y 5/-	4	Sandy SILT: light oliv	ve brown, fine sand, firm	, slightly m	oist	-
- -			25:							2.5Y 5/	,	light olive brown, fin	m moist			-
		6.3		Ш	Ш	Ш	Ш	Ц		2.5 ¥ 3/	<u>`</u>	nght onve blown, in	iii, moist			
-											-	Boring terminated at	26 feet.			- - -
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Boring Log						icuy/Jenks Consultants			
BORING LOCATION A reg 2 Rords	er witl	h Montrose Chemical		Boring Name 2BB-2-34					
DRILLING COMPANY		ľ	DRILLER		-	Douglas Aircraft			
Quaternary I DRILLING METHOD (S)	nvesti	gations	Joe Abr	eau	Project Name				
Earth Probe			1.5 inch	es	Project Number _	974002.00			
_PTH TO WATER Not Encounte	rod				ELEVATION Not Survey	TOTAL DEPTH ed 26 feet			
LOGGED BY					DATE STARTED	DATE COMPLETED			
J. Knight			· ·		4/11/97	4/11/97			
Recovered Collected Collected Paretrien Residence (boreshoot) Head Space (Reading (Reading	Depth (feet)	Lithology USCS Log	Munsell Color	SOI	L DESCRIPTION AND	DRILLING REMARKS			
		CL	2.5Y 3/3	Silty CLAY: dark olive	e brown, firm, dry	-			
5.0			2.5Y 4/2	dark gray brown, firm,	n, firm, moist				
	5-	ML	2.5Y 4/4	Clayey SILT with San	d: olive brown, fine sand	1, stiff, moist			
	1			decreasing clay, increa	sing sand, firm, slightly	moist -			
5.5	10-			soft, moist		_ •			
	-			-		-			
	15-		ļ	- -					
5.9	15-			increasing clay, soft, n	noist	-			
	-		 						
6.1	20-	MI	5Y 6/4	Sandy SILT: pale olive	e, fine sand, firm, slightl	y moist			
-	-			-		- -			
7.7	25-	SM	2.5Y 5/4	Silty SAND: light oliv	e brown, fine, loose, sli	ghtly moist			
_	-			- - -		-			
-	30-			Boring terminated at 2	6 feet.	- -			
-	-			_		-			
-	-			_		- -			
	35-		-	_		- -			
	-			-		- - -			
	40-			- •					
	40-								
	-	1		The state of the s		7			
		ll		_					

Boring L	.og_						redy/Jenks Consultants	
BORING LOCATIO			Mandana Chami	1		Boring Name	2BB-2-35	
DRILLING COMPA	NY		n Montrose Chemi	DRILLER				
Quate	rnary I	nvesti	gations	DRILL BIT (S) SIZE	reau	Project Name		
LILLING METHO				1.5 inch	ies	Project Number _ ELEVATION	974002.00	
DEPTH TO WATER	ξ					ELEVATION N - 4 C	TOTAL DEPTH 26 feet	
Not En	ncounte	ered				Not Surveyed	DATE COMPLETED	
J. Kni	ght					4/14/97	4/14/97	
Driven Recovered Collected S Pereintion Resistence (blueshoot)	Head Space Reading (ppm)	Depth (feet)	Lithology ^U	SCS Munsell .og Color	so	IL DESCRIPTION AND	DRILLING REMARKS	
	6.4	_	CL	10YR 3/2	Silty CLAY: very dark	gray brown, firm, moist		
		-		10YR 3/1	very dark gray		- - -	
		5-		10YR 3/3	dark brown, stiff, slig	htly moist	-	
		-	MI	2.5Y 5/4	Sandy SILT: light oliv	e brown, fine sand, some	e clay, firm, moist 	
	7.0	10-	M)	2.5Y 4/4	grades to Clayey SILT	T: olive brown, firm, moi	st, some fine sand	
		15*			decreasing clay, no sa	nd	- - - - -	
	7.2	20-	SN	2.5Y 5/4	Silty SAND: light oli	ve brown, fine, loose, slip	ghtly moist	
	7.6	25			medium dense, slight	ly moist		
-					- Boring terminated at	26 feet.		
-		30						
-		35	1		-			
			1		-			
		40			-			
-			-		-			

Bor									Kem	icuy/o	enks Cons	urtaires
BORING				er with	ı International Lig	ht Met	tale		Boring Name —	2BB-	6-1	
DRILLIN	NG C	COMPA	ANY			DRII	LLER		_		las Aircraft	
L. 'LLIN	V DV	Vater METH	Develo	pmen	<u>t</u>	DRII	Gary WI	hitley	Project Name			
	C	ME-	85, Ho	low St	em Auger		8 inches		Project Number	97400	TOTAL DEPTH	
DEPTH 1			c ncount	ered					Not Surveye	ed	IOIAL DEPIH	50.5 feet
LOGGEI	DBI	Y	neeber						DATE STARTED 4/23/97		DATE COMPLETED	4/23/97
1 70	SAM	APLES	пссьсі				I		4/23/71			4/23/31
Driven Recovered	Collected	Peristance (blows/foot)	Head Space Reading (ppm)	Depth (feet)	Lithology	SCS Ag	Munsell Color	SOI Asphalt Concrete, 3"	L DESCRIPTION AND	DRILLING	G REMARKS	
		4 5 4		-				ballast				- - -
- -		2 4 8 8	0	5 -	M1		2.5Y 4/3	Clayey SILT: olive bro	wn, medium stiff, damp	, slightly pla	astic, trace of fine	sand
- - -	***	2 4 9	0	10- - 15-			-					- - - - -
-	***	3 5 9	0	20-	SC		 7.5YR 5/4	Clayey Fine SAND: bi	own, medium stiff to sti	 iff, damp to	moist, slightly pla	stic
	***	4 7 9	0	30-	SP		5Y 6/4	SAND: pale olive, loo	se, damp, fine, trace of s	 silt		- - - - - - - -
	**	5 7 10	0	40 -			5Y 5/4	olive, loose, damp, fin	e, abundant shell fragme	ents		- - - - -

order with International Light velopment S) Hollow Stem Auger	Gary Whitley	Boring Name —— Project Name ——	2BB-6-1
velopment	Gary Whitley	_	
5)	Gary Willing	Project Name	Douglas Aircraft
Hollow Stem Auger	DRILL BIT (S) SIZE		974002.00
	8 inches	Project Number —	TOTAL DEPTH
untered		Not Surveyed DATE STARTED	DATE COMPLETED
berger		4/23/97	4/23/97
Depth (feet) Lithology USC Log	Munsell Color	SOIL DESCRIPTION AND	DRILLING REMARKS
45-	2.5¥ 4/4 Clayey GRA	VEL: olive brown, stiff to very stif	ff, damp, 3" thick layer, gravel is 1/8" to 1/2"
50 SP	5Y 5/4 SAND: olive	, medium dense, damp, fine, trace	of silt, no shell fragments
55-	Boring termin	nated at 50.5 feet.	
	55- 55- 70- 75-	SP 5Y 5/4 SAND (Cont	SP 5Y 5/4 SAND (Continued): olive, loose, damp, fine, at clayer GRAVEL: olive brown, stiff to very stift in diameter and sand street. SP 5Y 5/4 SAND: olive, medium dense, damp, fine, trace Boring terminated at 50.5 feet.

SO PIN						· i				(2		
ORILLING	Area 6	Bord	er with	<u>International</u>	Light 1	Metals DRILLER	Boring Name 2BB-6-2 Project Name Douglas Aircraft					
,	Water	Develo				Gary W DRILL BIT (S) SIZE		Project Name —				
•	METHO CME-	85, Hol	low St	em Auger		8 inches		Project Number _ ELEVATION	97400	TOTAL DEPTH		
EPTH TO		t ncount	ered					Not Surveye		50.5 feet		
OGGED F	3Y	neeber						DATE STARTED DATE COMPLETED 4/23/97 4/23/97				
5 A	MPLES	\$	Depth (feet)	Lithology	USCS Log	Munsell Color	so	IL DESCRIPTION AND	DRILLING			
	Resist	Head Sp Reading (ppm)					Asphalt Concrete, 3"					
	4 4 4		_		CL	10YR 3/1	ballast	, firm, damp, moderately	plastic			
	2 3 7	0	5-			10YR 3/2	very dark grayish bro	wn, stiff, damp, moderate	ely plastic, t	race of fine sand		
	2 3 7	0	10-		SC	2.5Y 4/3	Clayey Fine SAND: o	live brown, stiff, moist,	slightly plas	tic		
	7		-				-					
5500			15-				-					
	3 3 6	0	20-				-					
***	5		25									
	5 10 14	0	35		SP	5YR 5/8	SAND: yellowish red	l, medium dense, damp, i	fine			
	3 6 9	0	40				trace of fossil shell fi	agments				

				og							reuy/och	
BOR	UNC	LO	CATIC	N Row	or with	. International	Light M	Setals		Boring Name	2BB-6-2	
DRI	LLIN	ia c	OMPA	NY			D	RILLER	1 '41	Project Name	Douglas	Aircraft
	LLIN	V VG N	Vater VETHO	Develo DD (S)	pmen	<u> </u>	T C	Gary W ORILL BIT (S) SIZE		-	974002.0	
		C	ME- VATER	85, Ho	low St	em Auger		8 inches		Project Number - ELEVATION	7/4002.0	TAL DEPTH
EP	тн			ncount	ered					Not Survey	ed	50.5 feet
.00	GEI	D B Y	Y							DATE STARTED 4/23/97	DA	TE COMPLETED 4/23/97
	৳	SAN	PLES	neeber							DDW I DIO DI	
Ę	900	fected	Penetration Resistence (blows/floot)	Head Spece Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munseil Color	SOI	L DESCRIPTION AND	DRILLING KE	LMAKKS
ð	*	의	\$ 2 <u>2</u>	7 E							dama Gas	trace of forgil shall fragments
					-		SP	5YR 5/8	SAND (Continued): y	ellowish rea, meaium de	ense, damp, ime,	trace of fossil shell fragments
.					-				_			
Ì					-				-			
					-							
-		-			45-				-			
1					-				-			
					_				_			
					-				-			
××			4	;	-				-			
▩	▩	₩	4 13 17	10.4	50-				dense, no shell fragme	ents		
*	××	***	1/		 	11.11.11.11.11.1						
					-				-			
					_				Boring terminated at :	50.5 feet.		
					-				 -			
.					55-				<u> </u>			
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Boring									cirks consultants
BORING LOCAT Area	6, Bord	ler witl	n International	[Light]	Metals		Boring Name —	2BB-6	6-3
Wate	r Devel				Gary W	hitley	Project Name	Doug	las Aircraft
LLING MET	(S) GOI		tem Auger		DRILL BIT (S) SIZE 8 inches		Project Number	97400	2.00
DEPTH TO WAT	ER		em ruger	L		F	LEVATION Not Surveye		TOTAL DEPTH 50.5 feet
LOGGED BY	Encount						OATE STARTED	DATE COMPLETED	
D. So	hneebe	rger			1		4/23/97	-	4/23/97
Driven Recovered Collected Peretration Resistance (blowshoot)	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munseli Color	SOII Asphalt Concrete, 4"	DESCRIPTION AND	DRILLING	G REMARKS
4 6 8		_	rannor.	CL	10YR 3/1	ballast	k gray, stiff, moderately	plastic, dan	np, fine sand
2 5 10	0	5-		ML	5YR 5/4	Clayey SILT: reddish b	rown, very stiff, moist, s	slightly plas	stic
2 5 6	0	10-			5YR 4/3	reddish brown, trace of	fine sand		- - - - - - - - - -
3 4 7	0	20		SC	5YR 5/4	Clayey Fine SAND: re	 ddish brown, stiff, damp	o, slightly p	olastic -
6 11 14	0	30		SP	5YR 5/8	SAND: yellowish red,	medium dense, damp, fi	ine	- - - - - - -
	0	40				trace of silt			

BOI	UNG LOCATION Area 6, Border with International Light Metals								Boring Name —	2BB-6	5-3
DRI	LLINC	COMP	ANY			Light IV	RILLER	1.141	Project Name		las Aircraft
์ <u>ย</u>	LLINC	METH	Develo			Г	Gary W ORILL BIT (S) SIZE	•		97400	
DEF	тн то	CME-	85, Hol	low St	em Auger		8 inches		Project Number - ELEVATION		TOTAL DEPTH
ŀ	GED	Not E	ncounte	red					Not Survey DATE STARTED	ed	50.5 feet DATE COMPLETED
100		D. Scl	meeber	ger			,		4/23/97		4/23/97
Driven	Recovered Collected	Penetration (blows/tool)	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munseil Color	so	IL DESCRIPTION AND	DRILLING	G REMARKS
3			Atta	45-		SP	5YR 5/8	SAND (Continued): y	rellowish red, medium de	ense, damp, í	Tine, trace of silt
***		7 8 16 21	2.0	50-			5Y 5/4	olive, dense, damp, fi	ne, trace of silt		-
		21		55-			5Y 5/4	olive, dense, damp, fi			
				70- 75- 80-							
-				-				-			

Boring Log

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Borin								Item	reagra	enks Cons	
BORING LO	Area 6	, Bord	er with	ı International	Light !	Metals		Boring Name —	2BB-0	5-4	
DRILLING	Water	Develo	pmen	t		DRILLER Gary W	hitley	Project Name	Doug	las Aircraft	
LING	METHO	DD(S)		em Auger		DRILL BIT (S) SIZE 8 inches			97400	2.00	
DEPTH TO	WATER	₹		chi Augei	1	O HICKES		Project Number _		TOTAL DEPTH	
LOGGED B	Not E	ncounte	ered					Not Surveye DATE STARTED	ed	DATE COMPLETED	55.5 feet
SA SA	D. Sch	neeber	ger	1			**********	4/23/97 4/23/97			
Driven Recovered Collected	Penetration Resistance (blows/fool)	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color		L DESCRIPTION AND	DRILLING	G REMARKS	
	3 6 6		1				Asphalt Concrete, 4" ballast		- 		
	3 4 3	0	5-		ML	5YR 4/4	Clayey SILT: reddish	brown, firm, damp, sligh	tly to mode	rately plastic	
	3 4 6	0	10 -		SC	5YR 5/4	Clayey Fine SAND: r	eddish brown, stiff, mois	t, slightly pl	lastic	
	4	0	15-				-				
	488		25-								
	3 4 8 8	0	30-		SP	5YR 5/8	SAND: yellowish red	, medium dense, damp, f	line, trace of	f silt	
	5 5 10	0	40			5YR 4/6	yellowish red, mediu	n dense, damp, fine, trac	e of silt		

DRILLING COMPANY Water Development "LLING METHOD (S) CME-85, Hollow Stem Auger DEPTH TO WATER Not Encountered LOGGED BY DRILL BIT (S) SIZE 8 inches Pi ELET DAT	Project Name Project Number EVATION Not Surveyed TE STARTED 4/23/97 DESCRIPTION AND	2BB-6-4 Douglas Aircraft 974002.00 TOTAL DEPTH DATE COMPLETED 4/23/97
DRILLING COMPANY Water Development CLING METHOD (S) CME-85, Hollow Stem Auger DEPTH TO WATER Not Encountered LOGGED BY DRILL BIT (S) SIZE 8 inches Pi Barry Whitley Pi Brill BIT (S) SIZE 8 inches DRILL BIT (S) SIZE 8 inches Pi DATI	Project Name Project Number — EVATION Not Surveyed TE STARTED 4/23/97	974002.00 TOTAL DEPTH
LLING METHOD (S) CME-85, Hollow Stem Auger DEPTH TO WATER Not Encountered LOGGED BY DRILL BIT (S) SIZE 8 inches PI BRILL BIT (S) SIZE 8 inches DAT	Project Number — EVATION Not Surveyed TE STARTED 4/23/97	974002.00 TOTAL DEPTH
Not Encountered LOGGED BY DAT	Not Surveyed TE STARTED 4/23/97	d TOTAL DEPTH 55.5 feet DATE COMPLETED
LOGGED BY	TE STARTED 4/23/97	DATE COMPLETED
	4/23/97	4/23/97
D. Schneeberger	DESCRIPTION AND	
		DRILLING REMARKS
	oist, fine	nse, damp, fine, trace of silt

rin						Kennedy/Jenks Consultants
LLING O	rea 6	- Bord	er witl	International Light	Metals DRILLER	Boring Name 6-4
V	Vater	Develo	opmen	t l	Brian Fu	
LLING N	CME-	95, Ho	llow St	em Auger	8 inches	
тн то у N	Not E	t ncount	ered			Not Surveyed 50 feet
GED B	Y	night				DATE STARTED DATE COMPLETED 3/5/97 3/5/97
SAX E B	Penatration Resistance (blows/bod)	Read Space Reading (ppm)	Depth (feet)	Lithology USCS Log	Munseil Color	SOIL DESCRIPTION AND DRILLING REMARKS
* O	ZZ.	₹ĕS_	-			Asphalt, 6" _ Gravel Fill -
	2 4 6			CL	10YR 3/2	CLAY: dark brown, dry to slightly moist, stiff, moderately plastic
	6 6 8 12	2.8	5-	ML	2.5Y 4/3	SILT: olive brown, dry to slightly moist, very stiff, slightly plastic
	4 7 9	3.1	10-			
	3 7 14		15-	ML	2.5Y 6/3	Sandy SILT: light yellow brown, dry, very stiff
	8 12 22	0.9	20-		2.5Y 6/4	Silty SAND: light yellow brown, fine, dense, dry
			25-	SP	2.5Y 5/6	SAND: light olive brown, fine, dense, dry
	10 16 28	0.9	30-		2.5Y 6/4	light yellow brown
			35:			minor shell fragment zone from 34 to 34.5 feet
	15 27 32		40	SM	2.5Y 6/6	Silty SAND: olive yellow, dry, dense
				ML	2.5Y 5/6	Sandy SILT: light olive brown, dry, dense

		OCATIO A rea (- Bord	er witl	h International	Light N	<u> letals</u>		Boring Name 6-4				
DRIL	LING	COMPA	NY Devel o			D	RILLER Brian F i	ulce	Project Name Douglas Aircraft				
DRIL	LING	METH	OD (S)		em Auger	D	RILL BIT (S) SIZE 8 inches		Project Number9740	02.00			
EΡΊ	н то	WATER	ncounte						Not Surveyed	TOTAL DEPTH 50 feet			
LOG	GED E	Y	night						DATE STARTED 3/5/97	DATE COMPLETED 3/5/97			
بها	SA E g	Penetration Resistance Chows/foot)	Head Space (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color	so	IL DESCRIPTION AND DRILLIN	IG REMARKS			
₹ ※	Collect	(Ber	Res (ppr			ML	2.5Y 5/6	Sandy SILT (Continue	ed): light olive brown, dry, dense				
	***************************************			-			:	-		-			
▓				-		SP	2.5Y 7/2	SAND: light gray, fin	e, dry, dense				
				45- - -		SM	2.5Y 6/4	Silty SAND: light yel	lowish brown, slightly moist, dense	-			
		12 24 28	2.8	50-		SP	2.5Y 7/2	SAND: light gray, fin	e, dry, dense	_			
-				50				-		-			
				-				Boring terminated at :	50 feet.	-			
				55-				-					
				5				_		-			
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-				60-						5			
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-				65-				_		- - -			
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				70-						_			
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				75-				-		-			
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-				80-						-			
<u> </u>								l					

Boring I					Rennedy/Jenks Consultants
BORING LOCATIO			ı International Ligh	t Motale	Boring Name 2BB-6-5
DRILLING COMP.	ANY			DRILLER	Danielas Airconft
'LLING METH	Develo	pmen	t	Gary W DRILL BIT (S) SIZE	
CME	85, Hol	low St	em Auger	8 inches	
DEPTH TO WATER Not F.	R ncounte	red			Not Surveyed 50.0 feet
LOGGED BY					DATE STARTED DATE COMPLETED 4/24/97 4/24/97
M. Ba	lderma	n			4/24/9/ 4/24/5/
Driven Recovered Collected Penetration Resistence (bloveshoot)	Head Space Reading (ppm)	Depth (feet)	Lithology USC	S Munsett Color	SOIL DESCRIPTION AND DRILLING REMARKS
2					Asphalt Concrete
4 5	13.6	-	CL	10YR 2/2	Sandy CLAY: very dark brown, firm, dry to damp, fine sand, moderately plastic
4 6 9	13.6	5-	ML	10YR 4/4 10YR 2/1	Clayey Sandy SILT: dark yellowish brown, stiff, some fine gravel, dry to damp
3 4 5	22.7	10-	SM	10YR 5/4	Silty SAND: yellowish brown, loose, dry to damp, fine, trace of fine gravel, 40% fines
		15-			
5 5 8 -	13.6	20- -			
-		25-			
5 7 12		'	ML	10YR 4/3	Sandy SILT: brown, stiff, damp, 35% fine sand
12	22.7	35	SP/	SM 10YR 6/3	SAND: pale brown, trace of fines, medium dense, damp to moist
7 8 12	13.6	40	SP	10YR7/4 10YR 7/7	SAND: very pale brown mottled with yellow, medium dense, damp, trace of fines

BOI	UNG	LOC	CATIO	N DJ-	!4le	International	I inht M	[atals		Boring Name ——	2BB-6	-5		
DRI	LLIN	G C	OMPA	NY		International	Light V	RILLER Gary W	hitlar	Project Name		as Aircraft		
L	LLIN	G M	ETHO	Develo D(S)			C	RILL BIT (S) SIZE			97400			
DEF	тн т	OW	VATER			em Auger		8 inches		Project Number		TOTAL DEPTH 50.0 feet		
l	GED	N	ot En	counte	red					Not Surveyed DATE STARTED	1	DATE COMPLETED		
\$ 		M	I. Bal	derma	n			T		4/24/97		4/24/97		
Oriven	Recovered			Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color	so	SOIL DESCRIPTION AND DRILLING REMARKS				
					45-		SP	10YR 7/4 10YR 7/7	SAND (Continued): v	ery pale brown mottled wi	th yellow, 1	medium dense, damp, trace of fines		
※	▓	x	10 22 35	22.7	-		ML SP	10YR 5/6 10YR 7/3	Sandy SILT: yellowis	h brown, dense, damp, 35 wn, dense, damp, trace of	% fine sand	1		
					55-				Boring terminated at	50.0 feet.				
					80							- -		

		Log						Ken	iedy/Jei	nks Consi	illants
BORING			rder wit	h International	Light M	[etals		Boring Name	2BB-6-	6	
DRILLIN	G CO	MPANY	elopmer		D	RILLER Gary WI	hitley	Project Name	Dougla	s Aircraft	
LIN	G ME	THOD (S)	1		a	RILL BIT (S) SIZE		-	974002		
DEPTH T	O WA	ATER		item Auger		8 inches		Project Number -	Т	OTAL DEPTH	51.5 feet
LOGGET	No	t Encou	ntered					Not Survey DATE STARTED	ed D	OATE COMPLETED	
	M.	Balderi	man					4/24/97	1		4/24/97
Driven	Collected	Reselence (blows/fool) Head Space Reseleng	Depth (feet)	Lithology	USCS Log	Munsell Color		IL DESCRIPTION AND	DRILLING I	REMARKS	
××××	Т			illillillilli.			Asphalt Concrete			1 46	1
	X	2 3 3			CL	10YR 2/2	Sandy CLAY: very da	rk brown, firm, dry to da	amp, some coa	rse sand and line	gravei
	***	2 5 8	5		CL/CH	10YR 5/4	Silty CLAY: yellowis	h brown, stiff, dry to dan	np, some fine s	sand	- - - -
-	***	3 4 6	10								-
	***	5 8 10	20				mottled with calcium	carbonate			- - - -
			25								
- -	***	5 8 10	36)- - - - - - - - - - - - - - - - - - -	SP/SM	10YR 6/3	SAND: pale brown,	medium dense, damp to	moist, some si	lt	
			3:	5-			-				
		4 7 10	4	0-	SP	10YR 5/4	Silty SAND: yellow	ish brown, medium dens	e, damp to mo	ist, 70% sand	

	g L									
NG L	OCATIC	N Dondo	iéh	International	Light N	fetals		Boring Name	2BB-6	9-6
LING	COMPA	NY	. with	i invernativnati	I I	RILLER		_	Donal	as Aircraft
1	Water	Develop	pment	t		Gary W		-		
LING	METHO	D (S)			Γ	RILL BIT (S) SIZE R inches		Project Number	97400	2.00
OT H	WATER	55, <u>110ll</u>	UW SI	em Auger		o menes		ELEVATION		TOTAL DEPTH
	Not E	counte	red					Not Surveyed	l	51.5 feet DATE COMPLETED
GED E	3Y									4/24/97
SA	MPLES	=		Lithology	USCS	Munsell Color	so		DRILLING	
Collec	Penatra Resista (blows/1	Read S (pom)	(leet)				CTL CAND (O. 1	- D. collegish beauty mad	lium dense	damp to moist 70% sand
	4		45-		SM	10YR 5/4				
×	18 8 19 32		50-		SP	10YR 7/2	SAND: light gray, de	nse, damp to moist, some s	silt	
			60-				Boring terminated at	51.5 feet.		
				-						- - - - - -
	LING LING LING CH TO	NG LOCATIO A rea 6 LING COMPA Water LING METHO THO WATER Not E1 GED BY M. Bal SAMPLES SAMPLES PROPERTY OF THE PROPER	Area 6, Borde LING COMPANY Water Develo LING METHOD (S) CME-85, Holl TH TO WATER Not Encounte GED BY M. Balderman SAMPLES DEVELOPMENT OF STREET SAMPLES DEVE	Area 6, Border with LING COMPANY Water Development LING METHOD (S) CME-85, Hollow St TH TO WATER Not Encountered GED BY M. Balderman SAMPLIS BRANCE B	Area 6, Border with International LING COMPANY Water Development LING METHOD (8) CME-85, Hollow Stem Auger TH TO WATER Not Encountered GED BY M. Balderman SAMPLES Depth (feet) Lithology 4 9 18 8 50	NG LOCATION Area 6. Border with International Light M. LING COMPANY Water Development LING METHOD (S) CME-85, Hollow Stem Auger TH TO WATER Not Encountered SAMPLES S	NG LOCATION Area 6, Border with International Light Metals LING COMPANY Water Development LING METHOD (S) CME-85, Hollow Stem Auger HTO WATER Not Encountered GED BY M. Balderman SAMPLES 19 19 19 19 19 19 19 19 19 19 19 19 19	NOLICATION Area 6, Border with International Light Metals LING COMPANY Water Development CNLE 85, Hollow Stem Auger HTO WATER SITE OF THE WATER STATE OF THE WATER ST	RECEATION Area & Border with International Light Metals UNING CONTANT Water Development UNING METHOD Stem CMP 88, Hollow Stem Auger Foundation	Boring Name Area & Boring Name DRILLER

		og_												
BORING LOC		N . Park i	ing I o								Boring Name	2BB-	6-8	
DRILLING C	OMPA	NY							DRILLER		Project Name	Doug	las Aircraft	
"LLING M	uater (ETHO	mary I	nvesti	gat	ions				Joe Ab DRILL BIT (S) SIZ	E	1 -	97400		
E	arth :	Probe							1.5 incl	ies	Project Number _ ELEVATION	2/400	TOTAL DEPTH	
DEPTH TO W		icount	ered								Not Surveye	e d		26 feet
LOGGED BY	Kni	nht									DATE STARTED 4/16/97		DATE COMPLETED	4/16/97
SAM		gne		Γ				Ţ						
Briven Recovered Collected	Penetration Resistence (blows/foot)	Head Space Reading (ppm)	Depth (feet)		Lith	ology	•	USCS Log	Munsell Color	Asphalt, 3"	IL DESCRIPTION AND	DRILLING	G REMARKS	
		1.0	-					CL	10YR 2/2	Silty CLAY: very dar	k gray brown, firm, moist			
		1.2	5-					ML	2.5Y 5/6	Clayey SILT: light of	ive brown, stiff, slightly n	noist		
		1.6	10-					ML	2.5Y 5/6	SILT with Sand: ligh	t olive brown, fine sand, s	tiff, slightly	y moist	
		1.3	15-						2.5Y 5/2	gray brown, some cla	ay, decreasing sand, stiff,	slightly mo	ist	
		1.5	20					ML	2.5Y 4/4	Clayey SILT: olive b	rown, stiff, slightly moist	_ _		
		3.9	25	-				 ML	2.5Y 6/4	Sandy SILT: light ye	llow brown, very fine sam	– – – – nd, stiff, slig	thtly moist	
-				-						Boring terminated at	. 26 feet.			
-		1	30	-						-				
-				-						-				
			35	;-						-				
										-				
-			40	 						<u> </u>				
				1						-				

Boring										enks Consui	
BORING LOC		on . Park i	ing I a	•				Boring Name	2BB-	6-9	
DRILLING CO	OMPA	NY				DRILLER				las Aircraft	
LLING M	uate:	mary l	nvesti	gations		Joe Abr DRILL BIT (S) SIZE	1	Project Name			
Ea DEPTH TO W	arth	Probe				1.5 inch	es	Project Number - ELEVATION	97400	TOTAL DEPTH	
No	ot Er	ncount	ered					Not Survey	ed] 2	6 feet
LOGGED BY		aht						DATE STARTED 4/17/97		DATE COMPLETED	/17/97
SAMI	Kni:	gitt									
Driven Recovere Collected Penetration	Penetration Resistance (blows/foot)	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color		IL DESCRIPTION AND	DRILLING	G REMARKS	
		2.4	1		ML	10YR 2/2	Asphalt, 3" Clayey SILT: very dan	k brown, firm, moist		· — — — — —	
		3.2	5-		CL	10YR 3/2 10YR 3/4 2.5Y 4/4	-	very dark gray brown and		w brown, firm, moist	- - •
-		4.5	10-								
		4.9	15-			2.5Y 5/4	light yellow brown, d	ecreasing clay			•
		3.9	20-			2.5Y 5/6	light olive brown, trac	ce of clay, firm, moist			
		4.0	25-		ML	2.5Y 6/4	Sandy SILT: light yel	low brown, fine sand, fir	m, slightly	moist	
			-				Boring terminated at	26 feet.			
			30-								
				1							
							[
			35]							
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		l .		1	1		1				

SO ring			-						·		ADD	(10	- Italits
	ea 6,	Parki	ng Lo	t				DRILLER		Boring Name —	2BB-		
Qu LING ME	ıater	nary I	nvesti	gat	ions			Joe Abr	,	Project Name		las Aircraft	
Ear	rth I	Probe						1.5 inch	es	Project Number - ELEVATION	97400	TOTAL DEPTH	
		counte	ered							Not Survey	ed		26 feet
OGGED BY	Knig	ht								DATE STARTED 4/17/97		DATE COMPLETED	4/17/97
SAMP	(blows/foot)	Head Space Reading (ppm)	Depth (feet)		Lithol	ogy	USCS Log	Munsell Color		IL DESCRIPTION AND	DRILLING	G REMARKS	
	<u> </u>	2.2	_				CL	10YR 2/2	Asphalt, 3" Silty CLAY: very dark	c brown, firm, moist			
		2.7	-					2.5Y 4/4	olive brown				
			5-				ML	2.5Y 4/4	Clayey SILT: olive br	own, stiff, slightly moist			
		3.4	10- -						decreasing clay, some	fine sand, stiff, moist			
		3.1	15-					2.5Y 5/4	light olive brown, fire	n, moist			
		3.3	20-					2.5Y 5/6	light olive brown, stif	ff, slightly moist			
		3.0	25				SM	2.5Y 6/6	Silty SAND: olive ye	illow, fine, loose, slightly	/ moist		
			-						Boring terminated at	26 feet.			
			30	1					-				
			35						<u> </u>				
		i		1									
.				-									
			40	1					<u> </u>				
-				-					-				

Boring I						Kennedy/Jenks Consultants
BORING LOCATION		- I a	4			Boring Name 2BB-6-11
DRILLING COMP	<mark>6, Park</mark> ANY			Ī	ORILLER	Dougles Aircraft
·ILLING METH	od (S)	<u>nvesti</u>	gations		Joe Abr ORILL BIT (S) SIZE	
Earth DEPTH TO WATE	Probe				1.5 inch	ELEVATION TOTAL DEPTH
Not E	ncount	ered				Not Surveyed 26 feet DATE STARTED DATE COMPLETED
LOGGED BY J. Kn	ight					4/17/97 4/17/97
Recovered Collected Resistance (ibbreshoot)	1 8	Depth (feet)	Lithology	USCS Log	Munsell Color	SOIL DESCRIPTION AND DRILLING REMARKS
	2.1	. 1		CL	2.5Y 2.5/1	Asphalt, 3" Silty CLAY: black, firm, moist -
	2.1				2.5Y 4/4 2.5Y 3/3	mottled olive brown and dark olive brown, firm, moist
		3		ML	2.5Y 4/4	Clayey SILT: olive brown, firm, moist
	2.8	10-				slightly moist
	2.4	15				firm, moist
	2.9	20				increasing clay, stiff, slightly moist
	2.4	25			2.5Y 5/6	light olive brown, firm, moist, trace of fine sand
		30	-			Boring terminated at 26 feet.
			-			
-		25				
		35				
-						-
-		40)- - -			
			1	<u> </u>		

	∠og						Keni	
BORING LOCATION	ON 6. Park l	ing I o	4				Boring Name	2BB-6-12
DRILLING COMP.	ANY				DRILLER		_	Douglas Aircraft
Quate 'LLING METH	emary I OD (S)	nvesti	gations		Joe Abr DRILL BIT (S) SIZE		Project Name	
Earth DEPTH TO WATE	Probe				1.5 inch	es	Project Number _	974002.00 TOTAL DEPTH
Not E	k ncount	ered					Not Survey	ed 26 feet
LOGGED BY							DATE STARTED 4/17/97	DATE COMPLETED 4/17/97
J. Kn	giii				1		4(11/2)	411171
Recovered Collected Penetration Resistence (blows/dot)	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munseil Color	SOI Asphalt, 2"	L DESCRIPTION AND	DRILLING REMARKS
	2.8	-		CL	2.5Y 3/1	Silty CLAY: very dark	gray, stiff, moist	- -
	3.4	-			2.5Y 3/3	dark olive brown, stiff	, slightly moist	
		5-		ML	2.5Y 4/4	Clayey SILT: olive bro	own, very stiff, slightly r	noist,
		-				stiff		-
-	4.8	10-				some fine sand, decrea	- -	
	5.3	15-				firm, moist		
	5.3	20-				stiff, moist		- - - -
-	4.8	25-		ML	2.5Y 5/6	Sandy SILT: light oliv	e brown, fine sand, firm	ı, slightly moist
		30				Boring terminated at 2	26 feet.	
-			-			-		- -
		35.						
		33	_			-		
						 - -		
		40	_			-		• •
.			_			-		

Boring L									cirks Consultants	
BORING LOCATIO	on 5. Park i	ng I o			-		Boring Name 2BB-6-13			
DRILLING COMPA	ANY				DRILLER		_		las Aircraft	
Quate	rnary I	nvesti	gations		Joe Abr DRILL BIT (S) SIZE		Project Name			
Earth	Probe				1.5 inch	es	Project Number -	97400	TOTAL DEPTH	
DEPTH TO WATER Not E	≀ ncount	ered					Not Survey	ed	26 feet	
LOGGED BY	_l_4						DATE STARTED 4/17/97		DATE COMPLETED 4/17/97	
J. Kni	gnı			T	1					\neg
Driven Recovered Collected Penetration Residence (blows/box)	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color	SOI Asphalt, 3"	L DESCRIPTION AND	DRILLING	G REMARKS	
	11.6	-		CL	2.5Y 2.5/1	Silty CLAY: black, stil	ff, moist			
	10.9				10YR 3/3 10YR 3/4	mottled dark brown an	nd dark yellow brown, st	iff, moist		-
		5~		ML	2.5Y 5/6	Clayey SILT: light oliv	ve brown, stiff, slightly r	 moist	· 	
		-				very stiff, slightly moi	st			-
	11.8	10-			2.5Y 4/4	olive brown				-
-		-								-
	11.5	15-			2.5Y 5/4	light olive brown				-
	11.7	20-		ML	2.5Y 5/4	Sandy SILT: light oliv				
	11.2	25.		SM	2.5Y 6/4	Silty SAND: light yel	low brown, fine, loose, s	slightly moi	st	
						Boring terminated at 2	26 feet.			-
		30-								-
-			-			-				
-		35	-			-				
 			-			-				-
		40	1							
-			1			-				

BORING LOCAT				· · · · · · · · · · · · · · · · · · ·		Boring Name 2BB-6-14				
A rea DRILLING COM	6, Park i PANY	ing Lo	<u>t</u>	DRILLER		Boring Name ——				
Qua	ternary l	nvesti	gations	Joe Abr	eau l	Project Name		las Aircraft		
'LLING MET Eart	нор (s) h Probe			DRILL BIT (S) SIZE 1.5 inch	es	Project Number	97400			
DEPTH TO WAT	ER Encount	arad			ĒL	EVATION Not Surveyed		TOTAL DEPTH 26 feet		
LOGGED BY		cicu			DA	ATE STARTED		DATE COMPLETED		
J. Kı SAMPLE	night S		T	1		4/17/97		4/17/97		
Driven Recovered Collected Pereities Resistence	Head Space Reading (ppm)	Depth (feet)	Lithology USCS Log	Munsell Color		SOIL DESCRIPTION AND DRILLING REMARKS				
			CL	10YR 2/1	Asphalt, 3" Silty CLAY: black, stiff,	moist				
****	1.7	_			,,					
		-			-					
****	2.5	-		4						
	2.5	-		2.5Y 4/4	Clayey SILT: olive brow	n, stiff, slightly moist				
		5-			-			1		
	1	-			_			-		
		-			trace of fine sand			-		
		-								
	3.0	-	ML	2.5Y 4/4	Sandy SILT: olive brown	n, stiff, moist, fine sand				
****	1	10-			-			-		
-		-						-		
		-			.			-		
					=			-		
		_	 							
		15-	ML	2.5Y 4/4	Clayey SILT: olive brow	vn, very stiff, moist		_		
		15			_					
					-					
		-			-					
+		-			-			1		
-		-		-						
×		20-	sм	2.5Y 6/8	Silty SAND: olive yello	w, fine, loose, slightly m	noist	7		
*****	3.5	-			-			-		
*****		-						-		
-		-			-			-		
					-			-		
		25			}			-		
	3.2									
								4		
]							
					Boring terminated at 26	feet.		<u>.</u>		
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		30								
		'	1					-		
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Borin									J	enks Consultants
BORING L								Boring Name —	2BB-6	5-15
DRILLING	A.rea 6	, Parki	ing Lo	<u>t</u>		DRILLER				as Aircraft
. (Quate	mary l	nvesti	gations		Joe Abr		Project Name —		
'.ILLING	метно Earth	DD (S) Probe				1.5 inch	es	Project Number _ ELEVATION	97400	
DEPTH TO	WATER	Ł						ELEVATION Not Surveye	ed.	TOTAL DEPTH 26 feet
LOGGED I		ncount	ered					DATE STARTED		DATE COMPLETED
	J. Kni	ght	,	<u> </u>				4/18/97		4/18/97
Driven Recovered Collected	Penetration Resistence (blows/fbot)	Head Space Rending (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color		IL DESCRIPTION AND	DRILLING	REMARKS
		2.6	-		CL	10YR 2/2	Asphalt, 3" Silty CLAY: very dark brown, firm, moist			
▓⋘			-			10YR 3/3	dark brown, stiff, slig	htly moist		
	1	2.3	-				t			
			5-		ML	2.5Y 5/3 2.5Y 4/4	Clayey SILT: light oli	ve brown, very stiff, sligi	ntly moist	-
	×	3.1	10-				firm, moist			-
			-				-			-
	XXX	2.9	15-				decreasing clay			- - -
	X	2.8	20				-			- - - -
	NO.	2.4	25		SM	2.5Y 5/6	Silty SAND: light oli	ve brown, fine, loose, sli	 ghtly moist	
			200	- -			Boring terminated at	26 feet.		-
-			30	-			-			<u>-</u> - -
			35				-			- - -
										<u>-</u> -
			40	-						- -
]						

Boring I						Kennedy/Jenks Consultants
BORING LOCATIO	_N 5. Parki	ng I o				Boring Name 2BB-6-16
DRILLING COMPA	ANY				DRILLER	
'LING METH	mary I	<u>nvesti</u>	gations		Joe Abr DRILL BIT (S) SIZE	ZE
Earth DEPTH TO WATER	Probe				1.5 inch	
Not E	c ncounte	red				Not Surveyed 26 feet
LOGGED BY J. Kni	aht					DATE STARTED DATE COMPLETED 4/18/97 4/18/97
SAMPLES	gue			T		4/10/7/
Driven Recovers Collected Penetration Resistence (bioveration)	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munselt Color	SOIL DESCRIPTION AND DRILLING REMARKS Asphalt, 3"
	1.0	-		CL	10YR 2/1	Silty CLAY: black, firm, moist
	1.5	-			10YR 3/2	very dark brown
		5-		ML	2.5Y 5/6	Clayey SILT: light olive brown, stiff, slightly moist
	0.7	- - 10- -			2.5Y 5/4	light olive brown, decreasing clay
	1.7	15-		ML	2.5Y 5/4	Sandy SILT: light olive brown, fine sand, stiff, slightly moist
	2.1	20-		ML	2.5Y 5/4	Clayey SILT: light olive brown, stiff, slightly moist
	3.7	25-				decreasing clay, some fine sand, firm, moist
	:	30-				Boring terminated at 26 feet.
		35-				
		40-				

roject Name roject Number vation Not Surveyed E STARTED 4/24/97 DESCRIPTION AND Di	
roject Number vation Not Surveyed E STARTED 4/24/97 ESCRIPTION AND Di rown, firm, dry to damp	P74002.00 TOTAL DEPTH 50.0 feet DATE COMPLETED 4/24/97 RILLING REMARKS D, moderately plastic
roject Number vation Not Surveyed E STARTED 4/24/97 ESCRIPTION AND Di rown, firm, dry to damp	P74002.00 TOTAL DEPTH 50.0 feet DATE COMPLETED 4/24/97 RILLING REMARKS D, moderately plastic
Not Surveyed E STARTED 4/24/97 DESCRIPTION AND Di	TOTAL DEPTH 50.0 feet DATE COMPLETED 4/24/97 RILLING REMARKS D, moderately plastic
E STARTED 4/24/97 ESCRIPTION AND DI	DATE COMPLETED 4/24/97 RILLING REMARKS D, moderately plastic
rown, firm, dry to damp	RILLING REMARKS
rown, firm, dry to damp	o, moderately plastic
brown, stiff, damp, slig	ghtly plastic, trace of fine sand
	- -
brown, 30% fine sand, c	
	-
damp, moderately plas	stic, trace of fine sand
	- - - -
own, medium dense, da	amp, fine, 70% sand, trace of mica
	- - - -
o, dense, fine to medium	n, 30% shell fragments, 20% fines
	damp, moderately plas

		LC	CATIO			-				Ken	2DD / 17
Area 6, Parking Lot DRILLING COMPANY DRILLER								DRILLER		Boring Name —	
		V	Vater	Develo	pmen	t		Gary W DRILL BIT (S) SIZE	hitley	Project Name	Douglas Aircraft
		C	ME-	85, Hol	llow St	tem Auger		8 inches		Project Number ELEVATION	974002.00 TOTAL DEPTH
1		N	WATE	k ncounte	ered					Not Survey	yed 50.0 feet
LOG	LOGGED BY M. Balderman									DATE STARTED 4/24/97	DATE COMPLETED 4/24/97
Driven	Recovered	Collected	Penetration Resistance (blows/foot)	Head Space Reading (ppm)	Depth (feet)	Lithology	USCS Log	Munsell Color	so	IL DESCRIPTION ANI	D DRILLING REMARKS
Dutan	Recovered	SSS Colected	(DOM/MACK)) 8 8 2 2 7	(Judd) Dugosty eard(g prost)	45~ 50- 55- 60-		SM	Munsell Color 2.5Y 6/3	Silty SAND (Continu fragments, 20% fines	ed): light yellowish gray	D DRILLING REMARKS A damp, dense, fine to medium, 30% shell es, trace of fine mica, thinly laminated
- - -					75-				-		
-					80-				_		
					-						

APPENDIX B Laboratory Analytical Reports

APPENDIX B

Laboratory Analytical Reports

Please refer to Appendix B of the Parcel A, Phase II Soil Characterization Report, transmitted in July 1997, for laboratory analytical reports. A location index is provided on the following pages.

APPENDIX B ORANGE COAST ANALYTICAL AND ONSITE ENVIRONMENTAL LABORATORIES, INC. REPORT INDEX

Boeing Realty Corporation, C-6 Facility Los Angeles, California

		Report Nos.			Report Nos.
Area	Boring No.	Containing Results	Area	Boring No.	Containing Results
1	2BB- 1-1	41	1	2BB- 1-21	1, A
1	2BB- 1-1A	41	1	2BB- 1-22	1, 18, A
1	2BB- 1-2	41	1	2BB- 1-23	25, N
1	2BB- 1-3	12, G	1	2BB- 1-24	25, N
1	2BB- 1-4	21, M	1	2BB- 1-25	25, N
1	2BB- 1-5	21, M	1	2BB- 1-26	25, N
1	2BB- 1-6	21, M	1	2BB- 1-27	9, F
1	2BB- 1-7	12, G	1	2BB- 1-27A	35, Q
1	2BB- 1-8	12, G	1	2BB- 1-27B	35, Q
1	2BB- 1-9	12, G	1	2BB- 1-28	11, E
1	2BB- 1-10	12, G	1	2BB- 1-29	11, E
1	2BB- 1-11	12, G	1	2BB- 1-30	11, F
1	2BB- 1-12	12, G	1	2BB- 1-31	11, F
1	2BB- 1-13	12, G	1	2BB- 1-32	11, F
1	2BB- 1-14	40	1	2BB- 1-33	11, F
1	2BB- 1-15	40	1	2BB- 1-34	12, G
1	2BB- 1-16	40	1	2BB- 1-35	14, H
1	2BB- 1-17	40	1	2BB- 1-36	9, G
1	2BB- 1-18	22, L	1	2BB- 1-37	12, G
1	2BB- 1-19	1, A	1	2BB- 1-38	38
1	2BB- 1-20	1, A			
	AND COMPANY OF THE STREET				4,000
1A	2BB- 1A-1	25, O	1A	2BB- 1A-10	6, B
1A	2BB- 1A-2	30, O	1A	2BB- 1A-11	6, B
1A	2BB- 1A-3	30, O	1A	2BB- 1A-12	6, B
1A	2BB- 1A-4	30, O	1A	2BB- 1A-13	8, C
1A	2BB- 1A-5	30, O	1A	2BB- 1A-14	8, C
1A	2BB- 1A-5A	29, P	1A	2BB- 1A-15	8, C
1A	2BB- 1A-6	29, P	1A	2BB- 1A-16	8, C
1A	2BB- 1A-7	29, P	1A	2BB- 1A-17	21, M
1A	2BB- 1A-8	6, B	1A	2BB- 1A-18	42
1A	2BB- 1A-9	6, B	1A	2BB- 1A-19	42
			Contract of the Contract of th		(100 mm) 1 mm
2	2BB- 2-1	20, J	2	2BB- 2-19	Cancelled
2	2BB- 2-2	42	2	2BB- 2-20	20, J
2	2BB- 2-3	20, J	2	2BB- 2-21	20, J
2	2BB- 2-4	20, J	2	2BB- 2-22	18, I
2	2BB- 2-5	20, J	2	2BB- 2-23	14, H
2	2BB- 2-6	20, J	2	2BB- 2-24	14, 18, H
2	2BB- 2-7	20, J	2	2BB- 2-25	14, H
1 4	1 200 2.	, -			
2	2BB- 2-8	20, J	2	2BB- 2-26	14, H
			2 2 2	2BB- 2-26 2BB- 2-27 2BB- 2-28	14, H 14, H 14, H

BRC 2BB STUDY

10/30/97

Page 1 of 3

APPENDIX B ORANGE COAST ANALYTICAL AND ONSITE ENVIRONMENTAL LABORATORIES, INC. REPORT INDEX

Boeing Realty Corporation, C-6 Facility Los Angeles, California

		Report Nos.				Report Nos.
Area	Boring No.	Containing Results		Area	Boring No.	Containing Results
2	2BB- 2-11	19, 33, K, R		2	2BB- 2-29	14, H
2	2BB- 2-12	19, K		2	2BB- 2-30	14, H
2	2BB- 2-13	19, K		2	2BB- 2-31	18, I
2	2BB- 2-14	19, K		2	2BB- 2-32	18, I
2	2BB- 2-15	19, K		2	2BB- 2-33	18, I
2	2BB- 2-16	19, K		2	2BB- 2-34	18, I
2	2BB- 2-17	19, K		2	2BB- 2-35	20, J
2	2BB- 2-18	19, K				
100	200					32,000 1
4	2BB- 4-1	22, L		4	2BB- 4-4	22, L
4	2BB- 4-2	22, L		4	2BB- 4-5	22, L
4	2BB- 4-3	22, L		4	2BB- 4-6	22, L
4	2BB- 4-3A	32, R				5 S. PARTO ST.
	100			12.220	750.000 d 200.000	
5	2BB- 5-1	Cancelled		5	2BB- 5-25	Cancelled
5	2BB- 5-2	26, N		5	2BB- 5-26	10, G
5	2BB- 5-3	29, P		5	2BB- 5-27	13, H
5	2BB- 5-4	29, P		5	2BB- 5-28	10, G
5	2BB- 5-5	Cancelled		5	2BB- 5-29	10, G
5	2BB- 5-6	26, N		5	2BB- 5-30	15, I
5	2BB- 5-7	26, N		5	2BB- 5-31	10, G
5	2BB- 5-8	28, O		5	2BB- 5-32	10, G
5	2BB- 5-9	28, O		5	2BB- 5-33	13, H
5	2BB- 5-10	35, 41, Q		5	2BB- 5-34	13, H
5	2BB- 5-11	34, P		5	2BB- 5-35	13, H
5	2BB- 5-12	35, 41, Q		5	2BB- 5-36	13, H
5	2BB- 5-13	34, P		5	2BB- 5-37	15, I
5	2BB- 5-14	34, P		5	2BB- 5-38	15, I
5	2BB- 5-15	Cancelled		5	2BB- 5-39	13, H
5	2BB- 5-16	35, Q		5	2BB- 5-40	13, H
5	2BB- 5-17	28, O		5	2BB- 5-41	13, H
5	2BB- 5-18	28, O		5	2BB- 5-42	13, H
5	2BB- 5-19	34, P		5	2BB- 5-43	13, H
5	2BB- 5-20	21, M		5	2BB- 5-44	28, O
5	2BB- 5-21	42		5	2BB- 5-45	28, O
5	2BB- 5-22	42		5	2BB- 5-46	28, J, O
5	2BB- 5-23	16		5	2BB- 5-47	28, O
5	2BB- 5-24	Cancelled	3465 4465	5	2BB- 5-48	28, O
	170 CAN 180	100 MH 200 200 200 200 200 200 200 200 200 20		1614	The state of the s	
6	2BB- 6-1	31, Q		6	2BB- 6-10	24, M
6	2BB- 6-2	31, Q		6	2BB- 6-11	24, M
6	2BB- 6-3	31, Q		6	2BB- 6-12	24, M

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APPENDIX B ORANGE COAST ANALYTICAL AND ONSITE ENVIRONMENTAL LABORATORIES, INC. REPORT INDEX

Boeing Realty Corporation, C-6 Facility Los Angeles, California

Area	Boring No.	Report Nos. Containing Results	Area	Boring No.	Report Nos. Containing Results
6	2BB- 6-4	31, Q	6	2BB- 6-13	24, M
6	2BB- 6-5	36, R	 6	2BB- 6-14	26, N
6	2BB- 6-6	36, R	6	2BB- 6-15	26, 36, N
6	2BB- 6-7	Cancelled	6	2BB- 6-16	26, N
6	2BB- 6-8	22, L	 6	2BB- 6-17	37, R
6	2BB- 6-9	24, M	 		, , , , , , , , , , , , , , , , , , , ,
				14 M 14 M	AMELIAN SERVICE
36	2BB- 36-1	4, A	36	2BB- 36-10	17, I
36	2BB- 36-2	A	36	2BB- 36-11	17, J
36	2BB- 36-3	4, A	36	2BB- 36-12	17, I
36	2BB- 36-4	В	36	2BB- 36-13	39, R
36	2BB- 36-5	4, B	36	2BB- 36-14	38
36	2BB- 36-6	4, B	36	2BB- 36-15	Q
36	2BB- 36-7	4, B	36	2BB- 36-16	P
36	2BB- 36-8	7, D	36	2BB- 36-17	R
36	2BB- 36-9	17, I		200 200 0 0 17 20 20 00 00 00 00 00 00 10 10 10 10 10 10 10	
		All the second second		A. A. A. A. A. A. A. A. A. A. A. A. A. A	1 State 2
SA-NE	2BB- SA-NE-1	8, C	SA-NE	2BB- SA-NE-10	11, E
SA-NE	2BB- SA-NE-2	23, L	SA-NE	2BB- SA-NE-11	5, D
SA-NE	2BB- SA-NE-3	5, D	 SA-NE	2BB- SA-NE-12	5, D
SA-NE	2BB- SA-NE-4	5, D	SA-NE	2BB- SA-NE-13	11, E
SA-NE	2BB- SA-NE-5	3, C	SA-NE	2BB- SA-NE-14	11, E
SA-NE	2BB- SA-NE-6	7, D	 SA-NE	2BB- SA-NE-15	9, F
SA-NE	2BB- SA-NE-7	7, D	SA-NE	2BB- SA-NE-16	9, F
SA-NE	2BB- SA-NE-8	23, L	SA-NE	2BB- SA-NE-17	R
SA-NE	2BB- SA-NE-9	7, D			
		A CONTRACTOR			
SA-NW	2BB- SA-NW-1	3, C	SA-NW	2BB- SA-NW-8	3, C
SA-NW	2BB- SA-NW-2	2, B	SA-NW	2BB- SA-NW-9	3, C
SA-NW	2BB- SA-NW-3	2, B	SA-NW	2BB- SA-NW-10	3, C
SA-NW	2BB- SA-NW-4	2, B	SA-NW	2BB- SA-NW-11	3, C
SA-NW	2BB- SA-NW-5		SA-NW	2BB- SA-NW-12	3, C
SA-NW	2BB- SA-NW-6		SA-NW	2BB- SA-NW-13	FGL
SA-NW	2BB- SA-NW-7	23, L			
		SCREEN STREET		25 74 20 10 10 10 10 10 10 10 10 10 10 10 10 10	

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APPENDIX C Kennedy/Jenks Consultants Standard Operating Guides

SOG-1

KENNEDY/JENKS CONSULTANTS STANDARD OPERATING GUIDELINES

PERSONNEL DECONTAMINATION

INTRODUCTION

This guideline describes field procedures typically followed by Kennedy/Jenks Consultants for personnel decontamination. Decontamination of personnel is critical to health and safety during and after environmental fieldwork. It protects personnel from hazardous substances that can contaminate and eventually permeate protective clothing, respiratory equipment, tools, vehicles, and other equipment used onsite. Decontamination reduces exposure of site personnel to such substances by minimizing the transfer of harmful materials into clean areas and preventing the mixing of incompatible chemicals. It also protects the community by preventing uncontrolled transportation of contaminants from the site.

RECOMMENDED EQUIPMENT

The materials, equipment, and facilities described in the following list are not required in every case of personnel decontamination. However, they represent all that might be required for sites where maximum decontamination procedures are necessary.

- Drop cloths (plastic or other suitable material) on which heavily contaminated equipment and outer protective clothing can be deposited.
- Collection containers, such as drums or suitably lined trash cans, for storing disposable clothing, heavily contaminated personal protective clothing, or equipment that must be discarded.
- Lined box with absorbent for wiping or rinsing off gross contaminants and liquid contaminants.
- Large tubs to hold wash and rinse solutions; tubs should be at least large enough to hold a worker's booted foot and allow full access for washing.
- Non-phosphate wash solutions (e.g., Alconox, Liquinox) to wash off debris and chemicals and reduce hazards associated with any contaminants.

- Rinse solutions (e.g., potable or distilled water) to remove contaminants and contaminated wash solutions.
- Long-handled soft-bristled brushes to wash and rinse off contaminants.
- Paper or cloth towels for drying protective clothing and equipment.
- Lockers or containers for storage of decontaminated non-disposable clothing (e.g., hard hat, boots) and equipment.
- Department of Transportation (DOT)-approved containers for contaminated wash and rinse solutions.
- Plastic sheeting, sealed pads with drains, or other appropriate means of secondary containment of contaminated wash and rinse solutions that might be spilled during decontamination.
- Shower facilities for full body wash or, at a minimum, wash sinks available to personnel.
- Soap or wash solution, wash cloths, and towels for personnel.
- Lockers or containers for clean clothing and personal item storage.

LEVEL C DECONTAMINATION PROCEDURES

At a minimum, the following procedures apply when operating in a Level C exclusion zone:

- 1. Deposit items used onsite on plastic drop cloth. Segregation at the drop site reduces the probability of cross-contamination.
- 2. Scrub outer boots, gloves, and splash suit with decontamination solution or detergent water. Rinse items with generous amounts of water. Follow this step scrupulously for protective clothing that is not disposable.
- 3. Remove outer boots and gloves. Deposit or discard them in container with plastic liner.
- 4. To continue decontamination outside the exclusion zone, change canister or mask when leaving the zone. Upon re-entering, remember to gear up again.

- 5. Remove boots, chemical-resistant splash suit, and inner gloves and deposit them in separate containers lined with plastic.
- 6. Remove respirator by taking off facepiece. Avoid touching the face with the fingers. Deposit the facepiece on a plastic sheet.
- 7. As a field wash, clean hands and face thoroughly and shower as soon as possible. Wash respirator facepiece with respirator cleaning solution.
- 8. Ensure that all decontamination procedures are in accordance with the project sampling and analysis plan and Kennedy/Jenks Consultants Standard Operating Guideline, Investigation-Derived Residuals (Unit 9.0).

LEVEL D DECONTAMINATION PROCEDURES

If operating in a Level D area, perform the following procedures before leaving the site:

- 1. Wash and rinse all reusable equipment and garments. If gear is to be used elsewhere, wash it with detergent and then rinse with generous amounts of water.
- 2. If grossly contaminated, discard disposable protective clothing in appropriate container,
- 3. Wash hands and face thoroughly, and shower as soon as possible.

SPECIAL NOTES

When working in an exclusion zone, be sure that the decontamination area is placed in an upwind direction (plus or minus 20 degrees) from the site.

INVESTIGATION-DERIVED WASTES

Refer to the specific project sampling and analysis plan for details of disposition of investigation-derived wastes.

EMERGENCY DECONTAMINATION PROCEDURES

- 1. If the decontamination procedure is essential to the life saving process, decontamination must be performed immediately.
- 2. If a heat-related illness develops, protective clothing should be removed as soon as possible. Protective clothing and equipment should be washed, rinsed, and/or cut off.
- 3. If medical treatment is required to save a life, decontamination should be delayed until the victim is stabilized, or until decontamination will not interfere with medical treatment.
- 4. Dispose of contaminated clothing and equipment properly.
- 5. Alert medical personnel to the emergency.
- 6. Instruct medical personnel about potential contamination.
- 7. Instruct medical personnel about specific decontamination procedures.

REFERENCES

NIOSH/OSHA/USCG/EPA. 1985. Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities. Washington, D.C. Federal Way).

U.S. Environmental Protection Agency. 1988. Standard Operating Safety Guidelines. United States Environmental Protection Agency, Office of Emergency and Remedial Response, Washington, DC.

SOG-3

KENNEDY/JENKS CONSULTANTS STANDARD OPERATING GUIDELINES

SAMPLE PACKAGING AND SHIPPING

INTRODUCTION

This standard operating guide presents methods for shipping non-hazardous materials, including most environmental samples, via UPS, Federal Express and Greyhound. Many local laboratories offer courier service as well.

EQUIPMENT

- Coolers
- Sorbent material
- Bubble-wrap
- Strapping tape
- Labels and pens
- Chain-of-Custody forms
- Chain-of-Custody seals
- UPS, Greyhound, or Federal Express manifests

Samples shipped to the Pacific Environmental Laboratory (PEL) in San Francisco (CA) can be shipped with the United Parcel Service (UPS) or Federal Express on a next-day basis unless other arrangements are agreed to. Greyhound should only be used if there is direct service (e.g. Sacramento or Bakersfield to San Francisco). Ordinary coolers without drain plugs or with sealed drain plugs similar to coolers used for refrigerating food while camping can normally be used to ship non-hazardous samples. Specific requirements for packaging materials only apply if the samples being shipped are known to be hazardous materials as defined in 49 CFR 171.8 (samples are not considered hazardous waste and therefore manifest requirements do not apply). UPS holds shippers responsible for damage occurring in the event of accidents when a hazardous material is shipped as a non-hazardous material. Samples which obviously are hazardous materials should therefore be shipped as such, and samples which most likely are not hazardous materials should be shipped in coolers. Guidelines for shipping hazardous materials by UPS are provided in the Guide for Shipping Hazardous Materials available from UPS.

Specific labels are used for shipments of hazardous materials which the Field Services Supervisor is responsible for providing.

Procedures further described below therefore pertain to samples being shipped as nonhazardous materials.

Absorbent pads should be placed in the bottom of the shipping container to absorb liquids in the event of the jar breakage. Liquid samples in glass jars should also be wrapped in plastic bubble wrap. Volatile organics analysis (VOA) vials should be packed in sponge holders. An equal weight of ice substitute should be used to keep the samples below 4 degrees centigrade for the duration of the shipment (up to 48 hours). Labels of samples may get wet (which is typical) and should be covered with clear tape. Strong tape should be used to tape the coolers closed. Transportation regulations and UPS guidelines require absorbent capacity of the material to equal the amount of liquid being shipped; each pad absorbs approximately 1 quart of liquid. Designated shipping to a coordinator who is responsible for all shipment of samples for your projects.

Chain-of-custody analysis request sample disposition forms must accompany shipments of samples to the PEL in San Francisco. This form must accompany shipments to laboratories, in addition to other requirements of the laboratories. The form is self explanatory; if you have questions talk to the sample custodian at PEL. Keep copies of all forms you send. The sample disposition section of the form requires us to specify whether unused portions of samples will be returned to the client, to us, or disposed of by the lab, in which case the lab assesses a \$5 per sample disposal fee.

Samples should be preserved in accordance with requirements specified in the EPA requirements. Pay attention to where different kinds of acids and flammable are stored (e.g., nitric acid and nitrate compounds are not to be kept or shipped with hydrochloric acid and sulfuric acid).

SOG-11

KENNEDY/JENKS CONSULTANTS STANDARD OPERATING GUIDELINE

BORING AND SUBSURFACE SOIL SAMPLING

INTRODUCTION

This guideline describes the equipment and procedures that are used by Kennedy/Jenks Consultants personnel for drilling and for collecting soil samples.

EQUIPMENT

- Drill rigs and associated drilling and sampling equipment as specified in workplan:
 - Hollow stem auger
 - Air-rotary casing hammer
 - Dual tube percussion hammer
 - Cable tool
 - Mud rotary
 - Reverse rotary
- CME, 5 ft x 94 mm continuous-core barrels (hollow-stem auger)
- 2.5-inch or 2.0-inch I.D. split-spoon drive sampler
- 2.5-inch or 2.0-inch brass liners and sealing materials (plastic end caps,
 Teflon seals, silicon tape, zip-lock plastic bags)
- Large capacity stainless steel borehole bailer
- Foxboro FID-Organic Vapor Analyzer (OVA)
- HNU PID-Organic Vapor Analyzer
- OVM
- Sampler cleaning equipment

- Steamcleaner
- Generator
- Stiff-bristle brushes
- Buckets
- High purity phosphate-free liquid soap, such as Liquinox
- Methanol (if necessary)
- 0.1N nitric acid (if necessary)
- Deionized water
- Potable water
- Insulated sample storage and shipping containers
- Personal protective equipment (refer to project site safety plan)

TYPICAL PROCEDURE

- 1. Obtain applicable drilling and well construction permits prior to mobilization.
- 2. Clear drilling locations for underground utilities and structures by Underground Service Alert (USA) and subcontractors.
- 3. Have all downhole equipment steamcleaned prior to drilling each boring.
- 4. Ensure that soil borings not to be completed as monitoring wells are drilled with an auger drill rig, using hollow stem augers of appropriate size.
- 5. Make sure that borings not completed as monitoring wells are grouted to the surface, using a neat cement-bentonite grout (containing approximately 5 percent bentonite).
- 6. Ensure that borings made to construct shallow monitoring wells are drilled with an auger drill rig that uses hollow stem augers of appropriate size to provide an annular space of a minimum of 2 inches between borehole wall and well casing.
- 7. Verify that drill borings used to construct deeper monitoring wells are drilled with a dual tube percussion hammer or air-rotary casing hammer, using a steel drive casing of appropriate size, or with hollow stem augers through a steel conductor casing.
- 8. Collect soil samples for lithologic logging purposes with a CME continuous coring system in 5-foot increments.

- 9. Collect soil samples for lithologic logging and chemical and physical analyses by driving a split-spoon drive sampler, in 2.5-foot to 5-foot increments, below the depth of the auger bit with a rig-mounted hammer. Record the standard penetration resistance. If the sample is pushed rather than driven, be sure to record the push force.
- 10. When drilling with air-driven drill rigs, collect soil samples for lithologic logging purposes from the cyclone separator discharge on the dual tube percussion hammer, which separates air from formation cuttings as the drive casing is advanced.
- 11. Have the soils classified in the field in approximate accordance with the visual-manual procedure of the Unified Soil Classification System (ASTM D-2488-90) and the Munsell Color Classification.
- 12. Prior to each sampling event, wash the split-spoon drive sampler and brass liners with high purity phosphate-free soap, and double-rinse them with deionized water and methanol and/or 0.1N nitric acid, as appropriate.
- 13. At each sampling interval, collect soil in one brass liner for potential laboratory analysis. Cover this sample in Teflon sheets, seal it with plastic caps, and wrap it with silicon tape. Place a completed sample label on the brass liner. Then see that the samples are placed in appropriate containers and stored at approximately 4 °C.
- 14. As a field screening procedure (if applicable), at each sampling interval put the soil from one of the brass liners into an airtight container and allow it to equilibrate. After this, use an OVA to monitor the headspace in the container. If significant organic vapors are detected with the OVA, save the appropriate brass sample liners for potential laboratory analysis.
- 15. Complete chain of custody forms in the field and transport the samples in insulated containers, at an internal temperature of approximately 4 °C, to the selected laboratory.
- 16. If applicable, as described in the site safety plan, use an OVA to analyze in situ air samples from the breathing zone, the inside of the augers or casing, and other locations as necessary.

INSTALLATION AND TESTING OF ISOLATION CASING

1. Upon completion of the initial small-diameter boring, use a rotary drill bit of appropriate diameter to ream the boring to a depth (to be determined). Use a

bentonite mud mixture, in accordance with standard drilling practice, to maintain hole stability and to minimize infiltration and development of a mud cake on the borehole wall.

- 2. When reaming is completed, install isolation casing in the boring. Use conductor casing of an appropriate grade of 14-inch-diameter steel with a wall thickness of 0.25 inch, per the following specifications:
 - a. Sections are 20, 10, or 5 feet in length.
 - b. Casing sections are beveled or butt-jointed.
 - c. Field joints are arc-welded with 70 percent weld penetration, having a minimum of two passes per circumference.
 - d. Welding rod is compatible with casing material.
 - e. Joints are watertight.
 - f. Casing centralizers are set on the bottom, middle, and top of the total casing length. Centralizers are installed in sets of four, spaced at 90°, and attached at the bottom by a tack weld. They are flanged 2 inches at the top and bottom to contact the borehole wall.
- 3. Make volumetric calculations prior to grouting, to estimate the total volume of grout required to fill the annular space. The amount of grout actually used must be compared with this estimate. Ensure that the grout meets the following specifications:
 - a. Volumes of grout used must be within 10 percent of estimated value.
 - b. The grout consists of ASTM C150 Type II cement and water at a ratio of 5 gal. of water per 94 lb sack of cement, weighing approximately 118 lb per ft. Approximately 5 lb of powdered bentonite for each sack of cement is mixed into the grout.

Note that leakage tests or a bond log might be required to validate the grout seal.

- 4. Grout conductor casing into place by one of the following methods:
 - a. Pressure-grout from the bottom of the casing, using a packer or Braden-head to force the grout into the annular space between the conductor casing and the borehole wall.
 - b. Fill the casing with grout and use a spacer plug apparatus to force the grout into the annular space between the conductor casing and the borehole wall. The spacer plug must be composed of a material that can be left in the boring and later drilled through to complete it.
- 5. After allowing the grout to set, continue drilling with an appropriate diameter hollow stem auger. A rotary bit can be used initially to drill through any grout that might have hardened in, or directly below, the casing.

EQUIPMENT CLEANING

- 1. Prior to drilling each boring, steamclean downhole equipment (augers, well casing, sampler).
- 2. Before collection of each drilling sample, steamclean or wash sampling equipment (sampler and brass liners) with a brush, in a solution of high purity phosphate-free soap and potable water. Rinse the equipment with potable water and methanol and/or 0.1N nitric acid, as appropriate. Follow this with double-rinsing using distilled water.
- 3. Before leaving the site at completion of drilling, steamclean downhole equipment and vehicles that require cleaning.

INVESTIGATION-DERIVED RESIDUALS

Place soil cuttings and other residuals in appropriately labeled containers for disposition by the client. All soil samples transported to the laboratory must be returned to the client for disposition. Kennedy/Jenks Consultants is available to assist the client with options for disposition of residuals.

SOG-20B

KENNEDY/JENKS CONSULTANTS STANDARD OPERATING GUIDELINE

HANDLING AND DISPOSAL OF INVESTIGATION-DERIVED WASTE

INTRODUCTION

Environmental site investigations usually result in generation of some regulated waste, particularly if the project involves drilling and construction of monitoring wells. Any potentially hazardous or dangerous material that is generated during a site investigation must be handled and disposed of in accordance with applicable regulations (22 CCR, Chapter 30). This guideline provides a procedure to be used for dealing with investigation-derived wastes that have the potential of being classified as hazardous or dangerous, including soil cuttings, well development water, and decontamination water.

EQUIPMENT

- DOT-approved packaging (typically DOT 17E or 17H drums)
- Funnel
- Bushing wrench
- 15/16-inch socket wrench
- Shovel
- Appropriate markers (spray paint, paint pen)
- Plastic sheeting
- Drip pans
- Pallets

TYPICAL PROCEDURES

Preparing Containers

- 1. Place each container on a pallet if it is to be moved with a fork lift after it is full.
- 2. Place plastic sheeting under containers for soil and drip pans under containers used to hold water.

3. Ensure that packaging materials are compatible with the wastes to be stored in them. Bung-type drums should be used to contain liquids. If a liquid is corrosive, a plastic or polymer drum should be used.

Solids should be placed in open-top drums. Liners are placed in the drums if the solid material is corrosive or contains free liquids. Gaskets are also used on open-top drums.

Storing Wastes

- 1. As waste materials are generated, place them directly into storage containers.
- 2. Do not fill storage drums completely. Provide sufficient outage so that the containers will not be overfull if their contents expand.
- 3. After filling a storage drum, seal it securely, using a bung wrench or socket wrench, for a bung-type or open-top drum, respectively.
- 4. Label drums or other packages containing hazardous or dangerous materials and mark them for storage or shipment. To comply with marking and labeling requirements, affix a properly filled out yellow hazardous waste marker and a DOT hazard class label to each waste container. Do not mark drums with Kennedy/Jenks Consultants' name. All waste belongs to the client. Mark accumulation start-date.
- 5. During an ongoing investigation, use a paint marker to mark the contents, station number, date, and quantity of material on each drum or other container. Do not mix investigation-derived wastes with one another or with other materials. Do not place items such as Tyvek, gloves, equipment, or trash into drums containing soils or liquids, and do not mix water and soil. Disposable protective clothing, trash, soil, and water materials should be disposed of in separate containers.
- 6. Upon completion of field work, or the portion of the project that generates wastes, notify the client as to the location, number, contents, and waste type of waste containers. Remind the client of the obligation to dispose of wastes in a timely manner and in accordance with applicable regulations.

DRAFT

REGULATIONS

22 CCR, Chapter 30 California Hazardous Waste Regulations.

49 CFR 100-177, Federal Transportation of Hazardous Materials Regulations.

EPA Region X, Technical Assistance Team. 1984. Manual for Sampling, Packaging, and Shipping Hazardous Materials. Seattle, WA: EPA.

SOG-21

KENNEDY/JENKS CONSULTANTS STANDARD OPERATING GUIDELINE

BOREHOLE LOGGING

INTRODUCTION

This guideline describes procedures followed by Kennedy/Jenks Consultants personnel for classifying soils and for preparing borehole logs and other types of soil reports. It assists in obtaining uniform descriptions of soils encountered during borehole programs and enhances consistency among Kennedy/Jenks Consultants personnel and among projects.

Borehole logging is the systematic observation and recording of geologic and hydrogeologic information from subsurface borings and excavations. As adopted by Kennedy/Jenks Consultants, and in accordance with general practices followed by the profession, the Unified Soil Classification System (USCS), (ASTM D 2488-90) is used to identify, classify, and describe soils.

RECOMMENDED MINIMUM REQUIREMENTS

Soil classification and borehole logging should be conducted by a geologist or another professional trained in the classification of soils.

EQUIPMENT

- Boring log forms (1st and 2nd sheet, K/J Form F-40.1, 40.2)
- Daily inspection report forms (K/J Form F-3, F-4)
- Chain of custody forms/request for analysis forms
- USCS (ASTM D 2488-90) Table and Classification Chart
- Soil color chart (i.e., Munsell)
- American Geological Institute (AGI) data sheets

- Graph paper
- Engineer's scale
- Previous project reports and boring logs
- Pocket knife or putty knife
- Hand lens
- Supply of clean water
- Dilute HCL
- Gloves (latex, nitrile as described in project Health & Safety Plan)
- Personal protective clothing and equipment, as described in the project
 Health & Safety Plan
- Sample containers (brass, steel or aluminum liners, plastic or glass jars)
- Decontamination equipment and supplies
- Aluminum foil, teflon sheets and paper towels

TYPICAL PROCEDURES

Soil Classification

Soils are typically logged in conjunction with advancing boreholes and sampling subsurface soils. Although the guideline focuses on classifying soil samples obtained from boreholes, this particular procedure also applies to soils and sediments collected using other techniques (e.g., post hole digger, scoop, Van Veen sampler, and backhoe).

The USCS categorizes soils into 15 basic groups, each with distinct geologic and engineering properties. The following steps are required to classify a soil sample:

1. Observe basic properties and characteristics of the soil. These include grain- size grading and distribution and influence of moisture on fine-grained soil.

- 2. Assign the soil a USCS classification and denote it by the standard group name and symbol.
- 3. Provide a written description to differentiate between soils in the same group, if necessary.

Many soils have characteristics that are not clearly associated with a specific soil group. These soils might be near the borderline between groups, based on either grain-size grading and distribution, or plasticity characteristics. In this case, assigning dual group names and symbols might be appropriate (e.g., GW/GC or ML/CL).

The three basic soil groups are:

- <u>Coarse-Grained Soils</u>. For soils in this group, more than half of the material is larger than No. 200 sieve (0.074 mm).
- <u>Fine-Grained Soils</u>. For soils in this group, one half or more of the material is smaller than No. 200 sieve (0.074 mm).
- <u>Highly Organic Soils</u>. This group includes soils with high organic content, such as peat.

Note: No. 200 sieve is the smallest size that can be seen with the naked eye.

Classification of Coarse-Grained Soils

Coarse-grained soils are classified on the basis of:

- 1. Grain size and distribution
- 2. Quantity of fine-grained material (i.e., silt and clay)
- 3. Character of fine-grained material

Classification uses the following symbols:

Basic Symbols	Modifying Symbols
G - gravel	W - well graded
S - sand	P - poorly graded
	M - with silt fines
	C - with clay fines

The following are basic facts about coarse-grained soil classification:

- The basic symbol G is used if the estimated percentage of gravel is greater than that for sand. In contrast, the symbol S is used when the estimated percentage of sand is greater than the percentage of gravel.
- Gravels range in size from 3 in. to 1/4 in. (No. 4 sieve). Sands range in size from No. 4 sieve to No. 200 sieve. Use the Grain Size Scale Used by Engineers (ASTM Standards D422-63 and D643-78) to further classify grain size as specified by the USCS.

Note:

This grain size scale differs from the Modified Wentworth Scale used in teaching most geologists. Also, it introduces a distinction between sorting and grading.

- The modifying symbol W indicates good representation of all particle sizes.
- The modifying symbol P indicates that there is a predominant excess or absence of particle sizes.
- The symbol W or P is only used when there is less than 15 percent fines in a sample.
- Modifying symbol M is used if fines have little or no plasticity (silty).
- Modifying symbol C is used if fines have low to high plasticity (clayey).
- The following rules apply for the written description of the soil group name:

Types of Soil	Rule
Sands and gravels (clean)	Less than 5 percent fines
Sands (or gravels) with fines	5 to 15 percent fines
Silty (or clayey) sands or gravels	Greater than 15 percent fines

- Other descriptive information includes:
 - Color
 - Maximum grain size
 - Composition of grains
 - Approximate percentage of gravel, sand, and fines (use a percentage estimation chart)

<u>Modifiers</u>	<u>Description</u>
Trace	Less than 5 percent
Few	5 to 10 percent
Little	15 to 25 percent
Some	30 to 45 percent
Mostly	50 to 100 percent

- Mineralogy
- Grain shape (round, subround, angular, subangular)
- Moisture (dry, moist, wet)
- Structure
- Organic material
- Odor

Classification of Fine-Grained Soils

Fine-grained soils are classified on the basis of:

- 1. Liquid limit
- 2. Plasticity

Classification uses the following symbols:

Basic Symbols	Modifying Symbols
M - silt C - clay O - organic Pt - peat	L - low liquid limit H - high liquid limit

The following are basic facts about fine-grained soil classification:

 The basic symbol M is used if the soil is mostly silt, while symbol C applies if it consists mostly of clay. Use of symbol O indicates that organic matter is present in an amount sufficient to influence soil properties. The symbol Pt indicates soil that consists mostly of organic material.

- Modifying symbols are based on the following hand tests conducted on a soil sample:
 - Dry strength (crushing resistance)
 - Dilatency (reaction to shaking)
 - Toughness (consistency near plastic limit)
- Soil designated ML has little or no plasticity and can be recognized by slight dry strength, quick dilatency, and slight toughness.
- CL indicates soil with slight to medium plasticity, which can be recognized by medium to high dry strength, very slow dilatency, and medium toughness.
- OL is used to describe a soil that is less plastic than CL soil and can be recognized by slight to medium dry strength, medium to slow dilatency, and slight toughness.
- MH soil has slight to medium plasticity and can be recognized by low dry strength, slow dilatency, and slight to medium toughness.
- Soil designated CH has high plasticity and is recognizable by its high dry strength, no dilatency, and high toughness.
- OH soil is less plastic than CH soil and can be recognized by medium to high dry strength, slow dilatency, and slight to medium toughness.
- Other descriptive information includes:
 - Color
 - Moisture
 - Consistency (very soft, soft, firm, hard, very hard)
 - Structure
 - Compactness (loose, dense) for silts
 - Cementation (uses hydrogen chloride)
 - Odor

Logging Refuse

This procedure applies to the logging of subsurface samples collected from a landfill or other waste disposal site:

- 1. Observe refuse as it is brought up by the hollow stem auger or bucket auger.
- 2. If necessary, place the refuse in a plastic bag to examine the sample.
- 3. Record observations according to the following:
 - Composition (by relative volume), e.g., paper, wood, plastic, cloth, cement, construction debris. Use such terms as "mostly" or "at least half." Do not use percentages.
 - Moisture content: dry, damp, moist, wet.
 - State of decomposition: highly decomposed, moderately decomposed, slightly decomposed, etc.
 - Color: obvious mottling included.
 - Texture: spongy, plastic (cohesive), friable.
 - Odor.
 - Combustible gas indicator readings (measure downhole).
 - Miscellaneous: dates of periodicals and newspapers, degree of drilling effort (easy, difficult, very difficult).

DRAFT

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